SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS

OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, AND 30

1. REQUISITION NUMBER: SEE SCHEDULE

2. CONTRACT NO.	3. AWARD/EFFECTIVE DATE	4. ORDER NUMBER	5. SOLICITATION NUMBER	6. SOLICITATION ISSUE DATE
			N65540-06-Q-5296	14-Aug-2006

7. FOR SOLICITATION INFORMATION CALL:	a. NAME	b. TELEPHONE NUMBER (No Collect Calls)	8. OFFER DUE DATE/LOCAL TIME
	DAVID L. DENNISON	215.897.1494	12:00 AM 08 Sep 2006

9. ISSUED BY CODE N65540

NAVAL SURFACE WARFARE CENTER, CARDEROCK
CODE 3353, DAVID DENNISON
5001 SOUTH BROAD ST.
PHILADELPHIA PA 19112-1403

TEL: 215-897-1494
FAX: 215-897-7059

10. THIS ACQUISITION IS
- [ ] UNRESTRICTED
- [X] SET ASIDE: 100 % FOR
  - [X] SMALL BUSINESS
  - [ ] HUBZONE SMALL BUSINESS
  - [ ] 8(A)

NAICS: 334516
SIZE STANDARD: 500

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED
- [ ] SEE SCHEDULE

12. DISCOUNT TERMS

- [ ] 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)

13b. RATING

14. METHOD OF SOLICITATION
- [X] RFQ
- [ ] IFB
- [ ] RFP

15. DELIVER TO CODE N65540
NAVAL SURFACE WARFARE CENTER, CARDEROCK
RECEIVING OFFICER, FISC
NAVAL BUSINESS CENTER
1601 LANGLEY AVE, BLDG 542 E
PHILADELPHIA PA 19112-5051
TEL: FAX:

16. ADMINISTERED BY CODE

17a. CONTRACTOR/ OFFEROR CODE

TEL. FACILITY CODE

18a. PAYMENT WILL BE MADE BY CODE

- [ ] 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER

18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a. UNLESS BLOCK BELOW IS CHECKED [ ] SEE ADDENDUM

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

25. ACCOUNTING AND APPROPRIATION DATA

26. TOTAL AWARD AMOUNT (For Govt. Use Only)

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

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 2 COPIES
- [X] TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.

29. AWARD OF CONTRACT: REFERENCE
- [ ] OFFER DATED . YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:

30a. SIGNATURE OF OFFEROR/CONTRACTOR

31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)

31c. DATE SIGNED

30b. NAME AND TITLE OF SIGNER *(TYPE OR PRINT)*

30c. DATE SIGNED

31b. NAME OF CONTRACTING OFFICER *(TYPE OR PRINT)*

TEL: EMAIL:

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS (CONTINUED)

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

32a. QUANTITY IN COLUMN 21 HAS BEEN

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

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE
	32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT	37. CHECK NUMBER
☐ PARTIAL ☐ FINAL			☐ COMPLETE ☐ PARTIAL ☐ FINAL	

38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT		42a. RECEIVED BY *(Print)*	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	41c. DATE	42b. RECEIVED AT *(Location)*	
		42c. DATE REC'D *(YY/MM/DD)*	42d. TOTAL CONTAINERS

Section SF 1449 - CONTINUATION SHEET

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1	Each		
	ELECTRON DETECTORS FFP ELECTRON DETECTORS FOB: Destination NSN: 6630LLLT36475 DWG NR: MP-6490LV-EDET PURCHASE REQUEST NUMBER: 61958650				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		1	Each		
	SPECIMEN STAGE COMP FFP SPECIMEN STAGE COMP FOB: Destination NSN: 9999LLLT36473 DWG NR: MP-6490LV-STPTS PURCHASE REQUEST NUMBER: 61958654				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003		1	Each		
	VACUUM SYSTEM FFP VACUUM SYSTEM FOB: Destination NSN: 4310LLLT36471 DWG NR: MP-6490LV-AVAC PURCHASE REQUEST NUMBER: 61958656				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004		1	Each		
	OP INTEGRATION COMP FFP OP INTEGRATION COMP FOB: Destination NSN: 5330LLLT36474 DWG NR: MP-6490LV-OPS PURCHASE REQUEST NUMBER: 61958657				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005		1	Each		
	LOCAL SUPPLY ITEMS FFP LOCAL SUPPLY ITEMS FOB: Destination NSN: 9999LLLT36470 DWG NR: MP-6490LV-L/S PURCHASE REQUEST NUMBER: 61958659				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0006		1	Each		
	TURBO VACUUM PUMP FFP TURBO VACUUM PUMP FOB: Destination NSN: 4310LLLT36469 DWG NR: JUS-TMP50 PURCHASE REQUEST NUMBER: 61958664				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0007		1	Each		
	INFRARED CMBRSCPE FFP INFRARED CMBRSCPE FOB: Destination NSN: 4935LLLT36472 DWG NR: GW-IRCS-PIP PURCHASE REQUEST NUMBER: 61958675				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0008		1	Each		
	ELECTRON OPTICS FFP ELECTRON OPTICS FOB: Destination NSN: 6640LLLT36503 DWG NR: MP-6490LV-EOS PURCHASE REQUEST NUMBER: 61958647				
				NET AMT	

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0009		1	Each		
	TRANSPORTATION FFP TRANSPORTATION FOB: Destination NSN: 0000SHIPPING0 DWG NR: N/A PURCHASE REQUEST NUMBER: 61958644				

NET AMT

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government
0002	Destination	Government	Destination	Government
0003	Destination	Government	Destination	Government
0004	Destination	Government	Destination	Government
0005	Destination	Government	Destination	Government
0006	Destination	Government	Destination	Government
0007	Destination	Government	Destination	Government
0008	Destination	Government	Destination	Government
0009	Destination	Government	Destination	Government

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	29-SEP-2006	1	NAVAL SURFACE WARFARE CENTER, CARDEROCK RECEIVING OFFICER, FISC NAVAL BUSINESS CENTER 1601 LANGLEY AVE, BLDG 542 E PHILADELPHIA PA 19112-5051 FOB: Destination	N65540

0002	29-SEP-2006	1	(SAME AS PREVIOUS LOCATION) FOB: Destination	N65540
0003	29-SEP-2006	1	(SAME AS PREVIOUS LOCATION) FOB: Destination	N65540
0004	29-SEP-2006	1	(SAME AS PREVIOUS LOCATION) FOB: Destination	N65540
0005	29-SEP-2006	1	(SAME AS PREVIOUS LOCATION) FOB: Destination	N65540
0006	29-SEP-2006	1	(SAME AS PREVIOUS LOCATION) FOB: Destination	N65540
0007	29-SEP-2006	1	(SAME AS PREVIOUS LOCATION) FOB: Destination	N65540
0008	29-SEP-2006	1	(SAME AS PREVIOUS LOCATION) FOB: Destination	N65540
0009	29-SEP-2006	1	(SAME AS PREVIOUS LOCATION) FOB: Destination	N65540

CLAUSES INCORPORATED BY REFERENCE

52.219-1 Small Business Program Representations MAY 2004

CLAUSES INCORPORATED BY FULL TEXT

52.212-4 CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS (SEP 2005)

(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 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.

(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 transporta-tion is f.o.b. origin; or

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

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

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

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

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

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

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

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

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 3701, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 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 requirements of paragraph (t)(2)(i) of this clause, or fails to perform the agreement at paragraph (t)(2)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

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

(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 (JUN 2006)

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

(1) 52.233-3, Protest After Award (AUG 1996) (31 U.S.C. 3553).

(2) 52.233-4, Applicable Law for Breach of Contract Claim (OCT 2004) (Pub. L. 108-77, 108-78)

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items: [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 (JUL 2005) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).

___ (4) [Reserved]

___ (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 (MAY2004) (15 U.S.C. 637 (d)(2) and (3)).

___ (8) (i) 52.219-9, Small Business Subcontracting Plan (JUL 2005) (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.
___ (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 (SEP 2005) (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 2006) (E.O. 13126).
_X_ (16) 52.222-21, Prohibition of Segregated Facilities (FEB 1999).
_X_ (17) 52.222-26, Equal Opportunity (APR 2002) (E.O. 11246).
_X__ (18) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Elgible Veterans (DEC 2001) (38 U.S.C. 4212).
_X_ (19) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).
_X_ (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) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (DEC 2004) (E.O. 13201).
___ (22) (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)).
___ (23) 52.225-1, Buy American Act--Supplies (JUNE 2003) (41 U.S.C. 10a-10d).
___ (24) (i) 52.225-3, Buy American Act--Free Trade Agreements--Israeli Trade Act (JUN 2006) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, Pub. L. 108-77, 108-78, 108-286, and 109-53).
___ (ii) Alternate I (JAN 2004) of 52.225-3.
___ (iii) Alternate II (JAN 2004) of 52.225-3.
___ (25) 52.225-5, Trade Agreements (JUN 2006) (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).
___ (26) 52.225-13, Restrictions on Certain Foreign Purchases (FEB 2006) (E.o.s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).
___ (27) [Reserved]
___ (28) [Reserved]
___ (29) 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)).
___ (30) 52.232-30, Installment Payments for Commercial Items (OCT 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).
_X_ (31) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (OCT 2003) (31 U.S.C. 3332).
___ (32) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (MAY 1999) (31 U.S.C. 3332).
___ (33) 52.232-36, Payment by Third Party (MAY 1999) (31 U.S.C. 3332).
___ (34) 52.239-1, Privacy or Security Safeguards (AUG 1996) (5 U.S.C. 552a).
___ (35) (i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. Appx 1241(b) and 10 U.S.C. 2631).
___ (ii) Alternate I (APR 2003) of 52.247-64.

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

___ (1) 52.222-41, Service Contract Act of 1965, as Amended (JUL 2005) (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 (FEB 2002) (29 U.S.C. 206 and 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 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 (APR 2002) (E.O. 11246).

(iii) 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).

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

(v) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201).

(vi) 52.222-41, Service Contract Act of 1965, as Amended (JUL 2005), flow down required for all subcontracts subject to the Service Contract Act of 1965 (41 U.S.C. 351, et seq.).

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

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

252.212-7001 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS APPLICABLE TO DEFENSE ACQUISITIONS OF COMMERCIAL ITEMS (JUL 2006)

(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.

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

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

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

(4) _X_ 252.225-7001, Buy American Act and Balance of Payments Program (JUN 2005) (41 U.S.C. 10a-10d, E.O. 10582).

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

(6) ___ 252.225-7014, Preference for Domestic Specialty Metals (JUN 2005) (10 U.S.C. 2533a).

(7) ___ 252.225-7015, Restriction on Acquisition of Hand or Measuring Tools (JUN 2005) (10 U.S.C. 2533a).

(8) ___ 252.225-7016, Restriction on Acquisition of Ball and Roller Bearings (MAR 2006) (Section 8065 of Pub. L. 107-117 and the same restriction in subsequent DoD appropriations acts).

(9) ___ 252.225-7021, Trade Agreements (JUN 2006) (19 U.S.C. 2501-2518 and 19 U.S.C. 3301 note).

(10) ___ 252.225-7027, Restriction on Contingent Fees for Foreign Military Sales (APR 2003) (22 U.S.C. 2779).

(11) ___ 252.225-7028, Exclusionary Policies and Practices of Foreign Governments (APR 2003) (22 U.S.C. 2755).

(12)(i) ___ 252.225-7036, Buy American Act--Free Trade Agreements--Balance of Payments Program (JUN 2006) (41 U.S.C. 10a-10d and 19 U.S.C. 3301 note).

(ii) ___ Alternate I (JAN 2005) of 252.225-7036.

(13) ___ 252.225-7038, Restriction on Acquisition of Air Circuit Breakers (JUN 2005) (10 U.S.C. 2534(a)(3)).

(14) ___ 252.226-7001, Utilization of Indian Organizations, Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns (SEP 2004) (Section 8021 of Pub. L. 107-248 and similar sections in subsequent DoD appropriations acts).

(15) ___ 252.227-7015, Technical Data--Commercial Items (NOV 1995) (10 U.S.C. 2320).

(16) ___ 252.227-7037, Validation of Restrictive Markings on Technical Data (SEP 1999) (10 U.S.C. 2321).

(17) ___ 252.232-7003, Electronic Submission of Payment Requests (MAY 2006) (10 U.S.C. 2227)

(18) ___ 252.237-7019, Training for Contractor Personnel Interacting with Detainees (SEP 2005) (Section 1092 of Pub. L. 108-375).

(19) ___ 252.243-7002, Requests for Equitable Adjustment (MAR 1998) (10 U.S.C. 2410).

(20)(i) ___ 252.247-7023, Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631).

(ii) ____Alternate I (MAR 2000) of 252.247-7023.

(iii) ____Alternate II (MAR 2000) of 252.247-7023.

(iv) ____Alternate III (MAY 2000) of 252.247-7023.

(21) ___ 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:

(1) 252.225-7014, Preference for Domestic Specialty Metals, Alternate I (APR 2003) (10 U.S.C. 2533a).

(2) 252.237-7019, Training for Contractor Personnel Interacting with Detainees (SEP 2005) (Section 1092 of Pub. L. 108-375).

(3) 252.247-7023, Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631)

(4) 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 2006)

(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 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 (see FAR 52.212-3(j) for those representations and certifications that the offeror shall complete electronically);

(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

(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
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) Most unclassified Defense specifications and standards may be downloaded from the following ASSIST websites:

(i) ASSIST (http://assist.daps.dla.mil).

(ii) Quick Search (http://assist.daps.dla.mil/quicksearch).

(iii) ASSISTdocs.com (http://assistdocs.com).

(3) Documents not available from ASSIST may be ordered from the Department of Defense Single Stock Point (DoDSSP) by—

(i) Using the ASSIST Shopping Wizard (http://assist.daps.dla.mil/wizard);

(ii) Phoning the DoDSSP Customer Service Desk (215) 697-2179, Mon-Fri, 0730 to 1600 EST; or

(iii) Ordering from DoDSSP, Building 4, Section D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697-2667/2179, Facsimile (215) 697-1462.

(4) 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:

(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 (MAR 2005)--ALTERNATE I (JUN 2006)

An offeror shall complete only paragraph (j) of this provision if the offeror has completed the annual representations and certifications electronically at http://orca.bpn.gov. If an offeror has not completed the annual representations and certifications electronically at the ORCA website, the offeror shall complete only paragraphs (b) through (i) of this provision.

(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 ormore 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 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 orits 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 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 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 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
____ 50 or fewer	____ $1 million or less
____ 51--100	____ $1,000,001--$2 million
____ 101--250	____ $2,000,001--$3.5 million
____ 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 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 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," "Free Trade Agreement country," 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 Free Trade Agreement country (other than Moroccan end products) or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--Free Trade Agreements--Israeli Trade Act":

Free Trade Agreement Country End Products (Other than Moroccan Products) 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:

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. 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. 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 or designated 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 or designated country end products.

Other End Products:

Line Item No.	Country of Origin

(List as necessary)

(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25. For line items covered by the WTO GPA, the Government will evaluate offers of U.S.-made or designated 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 or designated 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 12689). (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 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.

(j)(1) Annual Representations and Certifications. Any changes provided by the offeror in paragraph (j) of this provision do not automatically change the representations and certifications posted on the Online Representations and Certifications Application (ORCA) website.

(2) The offeror has completed the annual representations and certifications electronically via the ORCA website at http://orca.bpn.gov. After reviewing the ORCA database information, the offeror verifies by submission of this offer that the representations and certifications currently posted electronically at FAR 52.212-3, Offeror Representations and Certifications--Commercial Items, have been entered or updated in the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201), except for paragraphs _____.

[Offeror to identify the applicable paragraphs at (b) through (i) of this provision that the offeror has completed for the purposes of this solicitation only, if any.

These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.]

(End of provision)

Your quotation must include the following information:

Price list number and date

or

Cost breakdown by direct labor (list categories, hours and pay rates). In addition to the direct rates, provide the applicable indirect information (G&A), overhead, facilities capital cost of money (FCCM) and profit.

or

Applicable General Services Administration (GSA) contract number.

If unable to quote FOB, Destination, please complete the following:

FOB Point _____

Estimated Shipping Charge _____

Business size:

Large _____ Small _____ Nonprofit _____

Cage Code _____

Tax Identification Number (TIN) _____

DUNS _____

ELIGIBILITY REQUIREMENTS

All contractors and individuals doing business with the Federal Government must be registered at the Contractor Central Registration Database located at: http://www.ccr.gov/

ELECTRONIC DISTRIBUTION OF CONTRACT DOCUMENTS

(a) The DoD Electronic Document Access (EDA) provides World Wide Web access to documents used to support the procurement, contract administration, bill paying, and accounting processes. EDA is being used by the Naval Surface Warfare Center, Carderock Division to electronically distribute all contract award and contract modification documents, including task and delivery orders. The contractor will be sent a notification email when a contractual document has been uploaded for distribution. The contractor will be required to register as a vendor on the EDA

web site (http://eda.ogden.disa.mil) in order to view/download their company's contractual documents. The files posted are in .pdf format and may be accessed using Adobe Acrobat Reader. Adobe Acrobat Reader is a free software that may be downloaded at http://www.adobe.com/products/acrobat/readstep.html.

(b) Offerors must provide the following information that will be used to make electronic distribution for any resultant contract.

Name of Point of Contact_____

Phone Number for Point of Contact _____

E-mail Address for Receipt of Electronic Distribution _____

USE OF THE GOVERNMENT-WIDE COMMERCIAL PURCHASE CARD

Will you accept the Government-wide Commercial Purchase Card as a method of purchasing supplies and/or services.

_____Yes _____ No

Will you accept the Government wide Commercial Purchase Card as a method of payment for your invoice.

_____Yes _____ No

DUTY FREE ENTRY

Will any materials being shipped to the Government require a duty-free entry certificate for foreign supplies.

_____Yes _____ No

If yes, please include dollar amount $_____

Note: The following provision 52.204-8 applies to this solicitation only when the solicitation includes the clause 52.213-4, Terms and Conditions—Simplified Acquisitions (Other Than Commercial Items)

52.204-8 Annual Representations and Certifications (Jan 2006)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is _____[insert NAISC code].

(2) The small business size standard is _____ [insert size standard].

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (c) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the offeror is currently registered in CCR, and has completed the ORCA electronically, the offeror may choose to use paragraph (c) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The offeror shall indicate which option applies by checking one of the following boxes:

[ ] (i) Paragraph (c) applies.

[ ] (ii) Paragraph (c) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(b) The offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at http://orca.bpn.gov. After reviewing the ORCA database information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause #	Title	Date	Change

Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

(End of provision)

1. Microscope Basics

The purchase shall be for a scanning electron microscope (SEM) capable of operating in a variable pressure mode with the user capable of selecting the pressure inside the specimen chamber. The purchase of the (SEM) includes the vendor performing an integration of an existing PGT brand SPIRIT EDXA detector onto the SEM. The SEM shall allow for the use of the SPIRIT system on samples contained in the SEM specimen chamber.

EDS and WDS can be mounted at 10mm working distance with 35° takeoff angle for optimum imaging and analysis simultaneously. External scan interface and external data exchange is built in allowing direct control of the SEM column scan coils by a remote digital scan generator such as with an EDS system. EDS, WDS, and EBSD are all in the same hemisphere.

The software includes comprehensive on-screen help for routine SEM operation

2. Microscope Parameters

2.1. Performance

High vacuum mode

Resolution:	3.0nm guaranteed (30kV, SE) 15nm guaranteed (1kV, SE)
Image modes:	Secondary electron image (SE). Backscattered electron image (BSE) detected by the SE Detector. Backscattered electron image detected by a multi-element solid-state BSE detector (composition, topography, and shadow images).

Low vacuum mode

Resolution:	4.0nm guaranteed (30kV, WD BSE)
Image mode:	Backscattered electron image (BSE) (composition, topography, shadow images)
LV pressure in specimen chamber:	10 to 270 Pa (1 Pa can also be set.)
Magnification:	5X (WD 48mm) to 300,000X (149 steps) Automatic magnification compensation for changes in kV and WD. Instantly changeable to one of five preset magnifications.
Probe current:	1pA to 1 μA

2.2 Electron Optics

2.2.1. Electron Gun

Accelerating voltage:	0.3kV to 30kV (55 steps) 0.3kV to 3kV: 100V steps, 3kV to 30kV: 1kV steps
Filament:	Pre-centered tungsten hairpin filament
Gun bias voltage:	Auto-bias linked to entire acceleration voltage range (Manual Override)
Gun alignment:	Automatic electromagnetic two stages (Manual Override)
Automatic functions:	Filament heating, gun bias, emission current, gun alignment, and condenser lens alignment are fully automated in the high vacuum mode.
Beam Blanking:	Built in (automatic after image acquisition)

2.2.2. Lens

Condenser lens:	Two-stage zoom condenser lens A preset spot size can be selected from a set of any three user-defined values.
Objective lens:	Super conical-type objective lens
Lens clear:	Built in for canceling OL & CL hystereses
Auto focus:	Built in (Manual Override)
Auto focus tracer:	Built in, automatically adjusts focus as Z is changed
Focus link:	Built in, linked to changes in accelerating voltage
Dynamic focus:	Built in, linked to changes in accelerating voltage and magnification.
Wobbler:	Built in. For centering objective lens; linked to magnification
Objective lens aperture:	Three-stage (20, 30, 100 micron diameter plus open position). Click stop with X-Y fine positioning.
Stigmator:	Electromagnetic eight-pole
Stigma memory:	Built in, linked to accelerating voltage and WD
Auto stigmator:	Built in (Manual Override)
Scanning coils:	Electromagnetic two-stage

Electronic image shift:	+/- 50μm in X - Y (joystick or mouse control)
Magnification compensation:	Built in, linked to accelerating voltage and WD
Preset magnification:	Built in, five magnifications can be pre-set.

2.3 Specimen stage

Type:	Fully-eucentric large goniometer stage
Stage control:	Five axes (X, Y, Z, R, T) asynchronous motor-driven, computer controlled. Stage motion via joystick, keyboard entry or mouse control.
Traverse:	X: 125mm, Y: 100mm Tilt: -10 to +90 degree, Rotation: 360° continuous Z: WD 5mm to 80mm continuous (focus range WD 5mm to WD 48mm) No X, Y, T, R limitation at longest WD.
Eucentric Rotation:	Built in, compensation with software
Eucentric Tilt:	Built in, compensation with software
Backlash compensation:	Built in, initiated by user
Specimen holders:	32mm diameter x 10mm height (with adaptor for one or two 12.5mm diameter specimens) 51mm diameter x 10mm height (with adaptor for seven 12.5mm diameter specimens and 5 and 10mm inserts) 76mm diameter x. 10mm (with 5 and 10mm insert)
Maximum specimen size:	304.8mm (12") diameter by 80mm tall specimen can be inserted. A 7.1" diameter area can be observed on 8" diameter specimen.
Maximum specimen weight:	3kg
Stage position indicator:	Graphic and digital display
Stage position memory:	No limitation on number of users and stage points files
Safety interlock:	Travel limits linked to specimen size by software or soft limits and a touch sensor to terminate stage and travel. Software shall allow user to limit Z travel for tall samples.

Specimen exchange: By opening the front door with slide in mechanism. Stage stays in position under OL for sample positioning. An airlock chamber is optionally available.

Electrical feed through for absorbed current: Built in (BNC type)

2.4 Accessory ports

EDS (energy dispersive x-ray analyzer)	1
WDS (wavelength dispersive x-ray analyzer)	1
EBSD (electron backscatter diffraction) perpendicular to tilt axis	1
BEIW (backscattered electron detector)	1
SCU, SHIC (specimen cooling unit, specimen holder for IC)	1
CLD (cathode luminescence)	1
IR-Camera	1
In-column probe current detector	1

2.5 Detectors

High vacuum mode

Secondary electron detector: Collector, scintillator, light guide, PMT with user control of both collector and scintillator voltages.

Backscattered electron detector: Multi-element, solid-state BSE detector is mounted at bottom of OL Pole Piece. Detector provides composition, topographic or shadow image.

Low vacuum mode

Backscattered electron detector: Multi-element solid-state BSE detector mounted at bottom of OL Pole Piece. Detector provides composition, topographic or shadow image. A low vacuum SE detector is optionally available.

2.6 Image Display

2.6.1. Monitor 20" LCD flat panel display at 1024 x 768 pixel resolution

2.6.2. Scanning system

Mode: Full image scan (2560 x 1980, 1280 x 960 pixels or 640 x 480 pixels) frame scan, ½ reduced scan

(320 x 240 pixels).

Scan speed:

	Horizontal (ms)	Vertical (s)	Pixels
SCAN1	0.284	0.075	320×240
SCAN2 Selectable	0.284	0.150	640×480
		0.5	640×480
SCAN3 Selectable	20 (16.67)	10 (8.33)	640×480
	20 (16.67)	20 (16.67)	1280×960
SCAN4 Selectable	80 (66.67)	80 (66.67)	1280×960
	160 (133.3)	160 (133.3)	1280×960
	80 (66.67)	160 (133.3)	2560×1920
PHOTO Selectable	80 (66.67)	80 (66.67)	1280×960
	160 (133.3)	160 (133.3)	1280×960
	80 (66.67)	160 (133.3)	2560×1920
	20 (16.67)	20 (16.67)	1280×960

Power frequency 50Hz, figure in ( ) is for 60Hz.

2.6.3. Scan Rotation

Electronic scan rotation allows 360° continuous rotation of the image without moving the stage. SRT is linked to WD and corrects for image rotation at all WDs and for orthogonality at any SRT setting.

2.6.4. Frame store

Frame store: 2560 x 1980 x 8 bit

Acquisition Size (Pixels): 640 x 480, 1280 x 960, 2560 x 1920

Display: Full screen or full pixel resolution with pan function.

2.6.5. Image processing

Frame Averaging: 1 to 255 Frames

Look up tables (LUT): Linear, contrast, gamma, multi level, partial enhance, reverse

Pseudo color: 16-color pseudo color display (user-definable)

Multi image Display: 2 or 4 images

Digital zoom: 2 or 4 times digital zoom

Dual magnification: A moveable, sizeable box can be placed on the image (in Dual Display mode) and a zoomed image of the area will be displayed.

Database:	A browseable image storage/management database containing: thumbnails, searching, image filtration, thresholding, montaging, measurements with statistics and report generation.
2.6.6. Text display	
	Annotation with PC fonts & colors
2.6.7. Data display	
Position:	Horizontal, at bottom of image
Contents:	
High vacuum mode	Accelerating voltage, magnification, micron bar, micron value, image number (4 digits) and either a 10-character alphanumeric display, the date or WD/Spot Size/Detector. Each item can be individually ON or OFF.
Low vacuum mode	Specimen chamber pressure in addition to above.
2.6.8 On-screen measurement	Multiple point to point, perimeter and angle measurements in PC fonts & colors. Scalar function with X, Y, D and Circle. Measurements can be stored on the image.
2.6.9 Image observation support functions	
Click centering:	Double-clicking centers any image position inside image-display area. (A similar operation is possible using Snap Shot images.)
Click center zoom:	Centers and zooms until the image is magnified up to about three times (15 steps). (A similar operation is possible using Snap Shot images.)
Drag:	Clicking and dragging the mouse moves the point under the mouse cursor to any desired position on the viewing area.
Drag and zoom:	Zooms until the image is magnified up to about three times (15 steps) on the dragged image.

Frame shift:	Moves an image by a specified frame overlap percentage of the field of view for easy surveying and image montaging.
Snapshot:	Pastes two frozen images at the side of the image-display area, and carries out stage movement and zoom control of the live image. Live images can be displayed and saved from snapshot area.
Scan rotation correction function:	Keeps X/Y stage movement direction constant with XY direction on the image when SRT (scan rotation) is on. Also corrects for image rotation at all WDs.
Full Screen Live Image	Live image can be viewed full screen.
Multiple Live Image Display:	Multiple live images can be displayed simultaneously. Includes; dual live image display, moveable split screen and a flexible window live image (variable size and position).
Signal Mixing	Any two live images can be mixed and displayed on screen.
Movies	Live image can be saved as an AVI file.
2.6.10. File saving format:	BMP, TIFF, JPEG, and automated generated .txt file.
Autosave:	One click save of digital image with drive, directory, sample name and automatically sequenced 4 digit extension..
Media:	Floppy Disk, Hard Disk, DVD R/W, Network

3. Computer Controls

3.1. Basic system PC OS:	Microsoft Windows XP™
3.2. Operation Method:	User customizable graphical user interface with mouse, keyboard and encoded knob set
3.3. User	
User Log In:	When a user has logged in, the SEM conditions are

set to the last conditions the user set. Login recalls user's custom settings including stage points, scan speeds, recipes, and customized GUI setups.

User Log Out: When a user has logged out, the SEM conditions are reset to the conditions before the user logged in.

3.4. User Customization

Mouse Control: Select mouse action movement (vertical or horizontal).

Stage Control: Select stage movement direction (<< or <>).

GUI display: The user can customize the GUI, placing most commonly-used functions in the icon bar.

3.5. Recipe (custom applications) The recipe saves operating conditions, stage location, vacuum mode, notes and a thumbnail image of the sample. Standard recipes for general users, and custom recipe files that are user login specific can be created to save users' operating conditions. The number of custom recipe files is limited only by PC memory.

3.6. Smile Shot Provides one-button setup and imaging based on sample type, vacuum mode, detector selection and sample preparation (coated/uncoated).

3.7. Desk Top Publishing

Function: Five printing templates provided. Image filename, title, date, observation conditions, titles and comments can be printed. Templates include 1, 2, 4 images per page at 4x5 or 8x10 format.

3.8. Specimen Exchange: Procedure for specimen exchange and vacuum pumping operation is displayed.

Filament Exchange: Procedure for filament replacement and vacuum pumping operation is displayed

3.9. Gun Alignment: A menu for filament heating, bias control and gun

alignment operations is displayed. Automatic and manual adjustments can be executed from this menu.

3.10. Auto functions

Auto gun control:	Built in (saturation, emission current, bias, alignment)
Auto focus (AFD):	Built in (Can be combined with ACB, linked to photo and change of accelerating voltage.)
Auto focus tracer:	Automatically corrects for focus as the stage is moved (Manual Override)
Auto stigmator (ASD):	Built in (Can be combined with ACB and AFD.)
Auto contrast and brightness (ACB):	Built in (Linked to photo, change of accelerating voltage.)

3.11 Stage Graphic Display

Graphic Display:	Specimen holder position is graphically displayed.
Numeric Display:	Real-time coordinate position is displayed on GUI and graphic window.
Stage Control:	Manual control via joystick, mouse or keyboard. Manual control with the pointer on the graphic display (X, Y, R, T, Z). Designation of the destination (X,Y) with the cross (+) pointer. Mouse control via point and shoot on live image. Field by field move via mouse with user selectable over lap. Low mag snapshot image navigation allows for display of two lower mag images with point and shoot or click/center/zoom function.
Coordinates File:	Stage coordinates can be saved
Coordinates Designation:	Stage coordinates can be designated and shifted by an absolute value or relative values.
Holder Selection:	Holder being used can be selected from display. (Activates software limits.)
Z Limit Display:	Graphical display of height of user entered specimen height.

(Activates software limits.)

3.12 On Screen Help	Comprehensive text/graphics for all aspects of routine operation.
3.13 SEM Exit	A dialog box for SEM program termination and SEM shutdown is displayed.

4. Vacuum System

System control:	Fully automated
Ultimate pressure:	High vacuum mode: $1x10^{4}$ Pa order Low vacuum mode: $1x10^{3}$ Pa order (at the specimen chamber pressure 27Pa)
Evacuation time:	High vacuum mode: approx. 4min 30sec Low vacuum mode: approx. 3min 30sec
Oil rotary pump:	100 L/min, (2)
Oil diffusion pump:	4" 420 L/sec with water baffle (TMP optionally available)
Reservoir tank:	Built in
Fore line trap:	Built in
Orifice:	Built in
Control valve:	Fine metering valve (computer controlled)
Chamber pressure gauge:	Pirani gauge (with PC digital read out)

5. safety devices

Devices to protect against vacuum, DP heater, water, power failure and leakage current are provided. Water flow rate adjustment valve is provided.

6. Miscellaneous

BNC input	BNC-R connector for X-ray (2 ch) and RM (2 ch)
BNC output	BNC-R connector for video output (1)
Service outlet	AC100V, 8A (1), AC100V, 5A (1)

7. OPERATION TABLE

Table 1150(w) x 900(d) x 750(h) mm with built-in power strip