

**INFORMATION TO OFFERORS OR QUOTERS  
SECTION A - COVER SHEET**

1. SOLICITATION NUMBER  N00173-98-R-KK01	2. (X one)	
	<input type="checkbox"/>	a. SEALED BID
	<input checked="" type="checkbox"/>	b. NEGOTIATED (RFP)
	<input type="checkbox"/>	c. NEGOTIATED (RFQ)

**INSTRUCTIONS**

NOTE THE AFFIRMATIVE ACTION REQUIREMENT OF THE EQUAL OPPORTUNITY CLAUSE WHICH MAY APPLY TO THE CONTRACT RESULTING FROM THIS SOLICITATION.

You are cautioned to note the "Certification of Non-Segregated Facilities" in the solicitation. Failure to agree to the certification will render your reply nonresponsive to the terms of solicitations involving awards of contracts exceeding \$25,000 which are not exempt from the provisions of the Equal Opportunity clause.

"Fill-ins" are provided on the face and reverse of Standard Form 18 and Parts I and IV of Standard Form 33, or other solicitation documents and Sections of Table of Contents in this solicitation and should be examined for applicability.

See the provision of this solicitation entitled either "Late Bids, Modifications of Bids or Withdrawal of Bids" or "Late Proposals, Modifications of Proposals and Withdrawals of Proposals."

When submitting your reply, the envelope used must be plainly marked with the Solicitation Number, as shown above and the date and local time set forth for bid opening or receipt of proposals in the solicitation document.

If NO RESPONSE is to be submitted, detach this sheet from the solicitation, complete the information requested on reverse, fold, affix postage, and mail. NO ENVELOPE IS NECESSARY.

Replies must set forth full, accurate, and complete information as required by this solicitation (including attachments). The penalty for making false statements is prescribed in 18 U.S.C. 1001.

3. ISSUING OFFICE (Complete mailing address, including ZIP Code)

CONTRACTING OFFICER  
NAVAL RESEARCH LABORATORY  
ATTN: CODE 3220.KK  
WASHINGTON DC 20375-5326

4. ITEMS TO BE PURCHASED (Brief description)

Solid Freeform Fabrication Rapid Prototyping System For Ceramics and Metals

5. PROCUREMENT INFORMATION (X and complete as applicable)

<input checked="" type="checkbox"/>	a. THIS PROCUREMENT IS UNRESTRICTED		
<input type="checkbox"/>	b. THIS PROCUREMENT IS A _____ % SET-ASIDE FOR ONE OF THE FOLLOWING (X one). (See Section I of the Table of Contents in this solicitation for details of the set-aside.)		
<input type="checkbox"/>	(1) Small Business	(2) Labor Surplus Area Concerns	(3) Combined Small Business/Labor Area Concerns

6. ADDITIONAL INFORMATION

The Naval Research Laboratory Contracting Division issues solicitations and amendments to solicitations electronically via the Internet at the following website: <http://heron.nrl.navy.mil/contracts/home.htm>.

Any amendments to this solicitation will be posted at that website. Amendments will not be distributed by any other means. It is the responsibility of potential offerors to periodically review the website for amendments to this solicitation.

7. POINT OF CONTACT FOR INFORMATION

a. NAME (Last, First, Middle Initial) King, Kevin M.	b. ADDRESS (Include Zip Code) See Block 3
c. TELEPHONE NUMBER (Include Area Code and Extension) (NO COLLECT CALLS) (202) 767-1495	

<b>8. REASONS FOR NO RESPONSE (X all that apply)</b>			
<input type="checkbox"/>	<b>a. CANNOT COMPLY WITH SPECIFICATIONS</b>		<input type="checkbox"/>
<input type="checkbox"/>	<b>c. UNABLE TO IDENTIFY THE ITEM(S)</b>		<input type="checkbox"/>
<b>e. OTHER (Specify)</b>			
<b>b. CANNOT MEET DELIVERY REQUIREMENT</b>			
<b>d. DO NOT REGULARLY MANUFACTURE OR SELL THE TYPE OF ITEMS INVOLVED</b>			
<b>9. MAILING LIST INFORMATION (X one)</b>			
<input type="checkbox"/>	<b>YES</b>	<input type="checkbox"/>	<b>NO</b>
<b>WE DESIRE TO BE RETAINED ON THE MAILING LIST FOR FUTURE PROCUREMENT OF THE TYPE OF TIME(S) INVOLVED.</b>			
<b>10. RESPONDING FIRM</b>			
<b>a. COMPANY NAME</b>		<b>b. ADDRESS (Include Zip Code)</b>	
<b>c. ACTION OFFICER</b>			
<b>(1) Typed or Printed Name (Last, First, Middle Initial)</b>		<b>(2) Title</b>	<b>(3) Signature</b>
			<b>(4) Date Signed (YYMMDD)</b>

DD FORM 1707 REVERSE, MAR 90

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FROM

AFFIX  
STAMP  
HERE

<b>SOLICITATION NUMBER</b>	
N00173-98-R-KK01	
<b>DATE (YYMMDD)</b>	<b>LOCAL TIME</b>
16 JUN 98	4:00 p.m.

**TO CONTRACTING OFFICER  
NAVAL RESEARCH LABORATORY  
CODE 3220.KK  
WASHINGTON, D.C. 20375-5326**

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) <span style="float: right;">▶</span>		RATING <b>DO-C9</b>	PAGE OF <b>1   35</b> PAGES
2. CONTRACT NO.	3. SOLICITATION NO. <b>N00173-R-KK01</b>	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED <b>13 MAY 98</b>	6. REQUISITION/PURCHASE NO.
7. ISSUED BY <b>CONTRACTING OFFICER NAVAL RESEARCH LABORATORY ATTN: CODE WASHINGTON DC 20375-5326</b>			8. ADDRESS OFFER TO (If other than Item 7)		

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

**SOLICITATION**

9. Sealed offers in original and \_\_\_\_\_ copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in **Building 222, Room 115** until **4:00** local time **16 JUN 98**  
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-10. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL: <span style="float: right;">▶</span>	A. NAME <b>Kevin M. King</b>	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) <b>(202) 767-1495</b>
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**11. TABLE OF CONTENTS**

(✓) SEC.	DESCRIPTION	PAGE(S)	(✓) SEC.	DESCRIPTION	PAGE(S)
PART I - THE SCHEDULE			PART II - CONTRACT CLAUSES		
<input checked="" type="checkbox"/> A	SOLICITATION/CONTRACT FORM	1	<input checked="" type="checkbox"/> I	CONTRACT CLAUSES	9
<input checked="" type="checkbox"/> B	SUPPLIES OR SERVICES AND PRICES/COSTS	2	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.		
<input checked="" type="checkbox"/> C	DESCRIPTION/SPECS./WORK STATEMENT	3	<input checked="" type="checkbox"/> J	LIST OF ATTACHMENTS	13
<input checked="" type="checkbox"/> D	PACKAGING AND MARKING	3	PART IV - REPRESENTATIONS AND INSTRUCTIONS		
<input checked="" type="checkbox"/> E	INSPECTION AND ACCEPTANCE	3	<input checked="" type="checkbox"/> K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	14
<input checked="" type="checkbox"/> F	DELIVERIES OR PERFORMANCE	4	<input checked="" type="checkbox"/> L	INSTR., CONDS., AND NOTICES TO OFFERORS	29
<input checked="" type="checkbox"/> G	CONTRACT ADMINISTRATION DATA	6	<input checked="" type="checkbox"/> M	EVALUATION FACTORS FOR AWARD	35
<input checked="" type="checkbox"/> H	SPECIAL CONTRACT REQUIREMENTS	8			

**OFFER (Must be fully completed by offeror)**

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within \_\_\_\_\_ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52-232-8) <span style="float: right;">▶</span>	10 CALENDAR DAYS	20 CALENDAR DAYS	30 CALENDAR DAYS	CALENDAR DAYS
	%	%	%	%
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE
15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	
15B. TELEPHONE NO. (Include area code)	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>		17. SIGNATURE	18. OFFER DATE

**AWARD (To be completed by Government)**

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c) ( ) <input type="checkbox"/> 41 U.S.C. 253(c) ( )		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified) <span style="float: right;">▶</span> ITEM	
24. ADMINISTERED BY (If other than Item 7)	CODE	25. PAYMENT WILL BE MADE BY	CODE
26. NAME OF CONTRACTING OFFICER (Type or print)		27. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	28. AWARD DATE

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

## PART I - THE SCHEDULE

## SECTION B

## SUPPLIES OR SERVICES AND PRICES/COSTS

## B-1 SUPPLIES OR SERVICES AND PRICES/COSTS

ITEM NUMBER	SUPPLIES OR SERVICES	QTY	UNIT	UNIT PRICE	AMOUNT
0001	The Contractor shall provide a Solid Freeform Fabrication/Rapid Prototyping System for Ceramics And Metals in accordance with the Statement of Work, Attachment No. 1.	1	LOT		
0002	The Contractor shall provide materials and supplies for use with CLIN 0001 in accordance with the Statement of Work, Attachment No. 1.	1	LOT		
0003	The Contractor shall provide for installation of CLIN 0001 in accordance with the Statement of Work, Attachment No. 1.	1	LOT		
0004	The Contractor shall provide for training in the operation of CLIN 0001, both at NRL, and at the Contractor's facility, in accordance with the Statement of Work, Attachment No. 1	1	LOT		
0005	The Contractor shall provide reports and data in accordance with Exhibit A (DD Form 1423).	1	LOT	*NSP	*NSP

TOTAL DOLLAR AMOUNT FOR CLINs\*\*: \$

\*NOT SEPARATELY PRICED

\*\*CONTRACT LINE ITEM NUMBER

**SECTION C**

**DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK**

**C-1** Items furnished under this contract shall comply with Attachment (1), Specifications with Exhibit A, DD Form 1423, Contracts Data Requirements List, and all other Attachments cited in Section J, which are incorporated by reference into Section C.

**C-2 REQUIREMENTS FOR ON-SITE CONTRACTORS**

For those portions of the work under this contract performed at any NRL site, the contractor shall comply with the Requirements for On-Site Contractors dated 02 February 1998 which are hereby incorporated by reference. The full text is available at <http://heron.nrl.navy.mil/contracts/home.htm>.

**SECTION D**

**PACKAGING AND MARKING**

**D-1** Preservation, packaging, packing and marking of all deliverable contract line items must conform to normal commercial packing standards to assure safe delivery at destination.

**D-2** The Contractor shall mark all shipments under this contract in accordance with the edition of ASTM-D-3951-90 "Standard Practice for Commercial Packaging" in effect on the date of the contract.

**D-3** The Contractor shall comply with FED STD 313 (Symbols for Packages and Containers for Hazardous Industrial Chemical and Materials) to the extent applicable.

**SECTION E**

**INSPECTION AND ACCEPTANCE**

**E-1 INSPECTION AND ACCEPTANCE CLAUSES BY REFERENCE:**

**FAR CLAUSE TITLE**

- 52.246-2 - Inspection Of Supplies - Fixed -Price (AUG 1996)
- 52.246-16 - Responsibility For Supplies (APR 1984)

**DFARS CLAUSE TITLE**

- 252.246-7000 - Material Inspection And Receiving Report (DEC 1991)

**E-2 INSPECTION AND ACCEPTANCE**

Inspection and acceptance must be accomplished by the Technical Manager or COR designated in Section G of this contract within seven (7) days after installation. Inspection and acceptance will be performed at the Naval Research Laboratory, Washington DC 20375-5320.

**SECTION F****DELIVERIES OR PERFORMANCE****F-1 DELIVERIES OR PERFORMANCE CLAUSES BY REFERENCE:****FAR CLAUSE    TITLE**

52.242-15    -    Stop-Work Order (AUG 1989)  
 52.242-17    -    Government Delay Of Work (APR 1984)  
 52.247-34    -    F.O.B. Destination (NOV 1991)

**F-2 FAR 52.211-8 - TIME OF DELIVERY (JUN 1997)**

(a) The Government requires delivery to be made according to the following schedule:

**REQUIRED DELIVERY SCHEDULE**

<b>ITEM NO.</b>	<b>QUANTITY</b>	<b>WITHIN DAYS AFTER DATE OF CONTRACT</b>
0001	1 LOT	180 DAC
0002	1 LOT	180 DAC
0003	1 LOT	194 DAC
0004	1 LOT	208 DAC
0005	1 LOT	in accordance with Exhibit A (DD Form 1423)

The Government will evaluate equally, as regards time of delivery, offers that propose delivery of each quantity within the applicable delivery period specified above. Offers that propose delivery that will not clearly fall within the applicable required delivery period specified above, will be considered nonresponsive and rejected. The Government reserves the right to award under either the required delivery schedule or the proposed delivery schedule, when an offeror offers an earlier delivery schedule than required above. If the offeror proposes no other delivery schedule, the required delivery schedule above will apply.

## OFFEROR'S PROPOSED DELIVERY SCHEDULE

ITEM NO.	QUANTITY	WITHIN DAYS AFTER DATE OF CONTRACT
----------	----------	---------------------------------------

(b) Attention is directed to the Contract Award provision of the solicitation that provides that a written award or acceptance of offer mailed, or otherwise furnished to the successful offeror, results in a binding contract. The Government will mail or otherwise furnish to the offeror an award or notice of award not later than the day award is dated. Therefore, the offeror should compute the time available for performance beginning with the actual date of award, rather than the date the written notice of award is received from the Contracting Officer through the ordinary mails. However, the Government will evaluate an offer that proposes delivery based on the Contractor's date of receipt of the contract or notice of award by adding (i) five calendar days for delivery of the award through the ordinary mails or (ii) one working day if the solicitation states that the contract or notice of award will be transmitted electronically. (The term "working day" excludes weekends and U.S. Federal holidays.) If, as so computed, the offered delivery date is later than the required delivery date, the offer will be considered nonresponsive and rejected.

**F-3 PLACE OF DELIVERY - FOB DESTINATION**

The contractor shall deliver supplies, all transportation charges paid, to destination in accordance with the clause in Section F of the Schedule titled FAR 52.247-34 FOB Destination (NOV 1991).

Receiving Officer  
 Naval Research Laboratory  
 Contract Number  
 ATTN: \*  
 CODE: \*  
 LOCATION: \*  
 Bldg. 28  
 4555 Overlook Avenue, SW  
 Washington DC 20375-5320

(\* To be filled in at time of award.)

**SECTION G**

**CONTRACT ADMINISTRATION DATA**

**G-1 PROCURING OFFICE REPRESENTATIVE**

In order to expedite administration of this contract, the Administrative Contracting Officer (ACO) will direct inquiries to the appropriate office listed below. Please do not direct routine inquiries to the person listed in Item 20A on Standard Form 26.

Contract Matters - Kevin M. King, Code , (202)767-1495 , DSN 297- 1495, or Telecopier (202)767-6197

Security Matters -Mr. Charles Rogers, Code 1221, (202) 767-2240, DSN 297-2240

Safety Matters - Mr. Kirk J. King, Code 1240, (202)767-2232, DSN 297- 2232

Patent Matters - Mr. Thomas McDonnell, Code 3008.2, (202)767-3427, DSN 297-3427

Release of Data - Mr. Richard L. Thompson, Code 1230 (202) 767-2541, DSN 297-2541

The ACO will forward invention disclosures and reports directly to the Associate Counsel for Patents, Code 3008.2, Naval Research Laboratory, Washington DC 20375-5320. The Associate Counsel for Patents will return the reports along with a recommendation to the Administrative Contracting Officer. The Associate Counsel for Patents will represent the Contracting Officer with regard to invention reporting matters arising under this contract.

**G-2 CONTRACTING OFFICER'S REPRESENTATIVE (COR) - FUNCTIONS AND LIMITATIONS**

\* is hereby designated the cognizant COR who will represent the Contracting Officer in the administration of technical details within the scope of this contract and inspection and acceptance. The COR is not otherwise authorized to make any representations or commitments of any kind on behalf of the Contracting Officer or the Government. The COR does not have the authority to alter the Contractor's obligations or change the specifications in the contract. If, as a result of technical discussions, it is desirable to alter contract obligations or statements of work, a modification must be issued in writing and signed by the Contracting Officer. The COR is responsible for reviewing the bills and charges submitted by the Contractor and informing the ACO of areas where exceptions are to be taken.

( \* To be filled in at time of award)

**G-3 NAPS 5252.232-9000 - SUBMISSION OF INVOICES (FIXED PRICE) (JUL 1992)**

(a) "Invoices" as used in this clause does not include contractor's requests for progress payments.

(b) The contractor shall submit original invoices with 4 copies to the address identified in the solicitation/contract award form (SF 26-Block 10; SF 33-Block 23; SF 1447-Block 14), unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order (DD 1155-Block 13 or SF 26-Block 10).

(c) The use of copies of the Material Inspection and Receiving Report (MIRR), DD Form 250, as an invoice is encouraged. DFARS Appendix F-306 provides instructions for such use. Copies of the MIRR used as an invoice are in addition to the standard distribution stated in DFARS F-401.

(d) In addition to the requirements of the Prompt Payment clause of this contract, the contractor shall cite on each invoice the contract line item number (CLIN); the contract subline item number (SLIN), if applicable; the accounting classification reference number (ACRN) as identified on the financial accounting data sheets, and the payment terms.

(e) The contractor shall prepare:

- a separate invoice for each activity designated to receive the supplies or services.
- a consolidated invoice covering all shipments delivered under an individual order.
- either of the above.

(f) If acceptance is at origin, the contractor shall submit the MIRR or other acceptance verification directly to the designated payment office. If acceptance is at destination, the consignee will forward acceptance verification to the designated payment office.

**G-4 ACCOUNTING AND APPROPRIATION DATA**

(To be filled in at time of award)

**SECTION H**

**SPECIAL CONTRACT REQUIREMENTS**

**H-1 TYPE OF CONTRACT**

(To be filled in at time of award)

**H-2 REPRESENTATIONS AND CERTIFICATIONS**

The Contractor's completed Representations, Certifications, and Other Statements of Offerors or Respondents is incorporated herein by reference in any resultant award.

**H-3 YEAR 2000 COMPLIANT INFORMATION TECHNOLOGY**

Information technology delivered under this contract shall be Year 2000 compliant as defined at FAR 39.002. "Information technology" is defined at FAR 2.101.

**PART II - CONTRACT CLAUSES****SECTION I****CONTRACT CLAUSES****I-1 52.252-2 - CLAUSES INCORPORATED BY REFERENCE (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

<http://www-far.npr.gov/References/References.html>

<http://heron.nrl.navy.mil/contracts/home.htm>

**a. FEDERAL ACQUISITION REGULATION CLAUSES****FAR CLAUSE    TITLE**

- 52.202-1 - Definitions (OCT 1995)
- 52.203-3 - Gratuities (APR 1984)
- 52.203-5 - Covenant Against Contingent Fees (APR 1984)
- 52.203-6 - Restrictions On Subcontractor Sales To The Government (JUL 1995)
- 52.203-7 - Anti-Kickback Procedures (JUL 1995)
- 52.203-8 - Cancellation, Rescission, And Recovery Of Funds For Illegal Or Improper Activity (JAN 1997)
- 52.203-10 - Price Or Fee Adjustment For Illegal Or Improper Activity (JAN 1997)
- 52.203-12 - Limitation On Payments To Influence Certain Federal Transactions (JUN 1997)
- 52.204-4 - Printing/Copying Double-Sided On Recycled Paper (JUN 1996)
- 52.209-6 - Protecting The Government's Interest When Subcontracting With Contractors Debarred, Suspended, Or Proposed For Debarment (JUL 1995)
- 52.211-5 - Material Requirements (OCT 1997)
- 52.211-15 - Defense Priority and Allocation Requirements (SEP 1990)
- 52.215-2 - Audit And Records-Negotiation (AUG 1996)
- 52.215-8 - Order of Precedence - Uniform Contract Format (OCT 1997)
- 52.215-14 - Integrity of Unit Prices (OCT 1997)
- 52.215-17 - Waiver of Facilities Capital Cost of Money (OCT 1997)
- 52.219-8 - Utilization Of Small, Small Disadvantaged and Women-Owned Small Business Concerns (JUN 1997)
- 52.222-1 - Notice To The Government Of Labor Disputes (FEB 1997)
- 52.222-3 - Convict Labor (AUG 1996)
- 52.222-20 - Walsh-Healey Public Contracts Act (DEC 1996)
- 52.222-21 - Prohibition of Segregated Facilities (APR 1984)(DEVIATION)
- 52.222-26 - Equal Opportunity (APR 1984)(DEVIATION)
- 52.222-35 - Affirmative Action For Special Disabled And Vietnam Era Veterans (APR 1998)
- 52.222-36 - Affirmative Action For Handicapped Workers (APR 1984)
- 52.222-37 - Employment Reports On Special Disabled Veterans And Veterans Of The Vietnam Era (APR 1998)

- 52.223-2 - Clean Air And Water (APR 1984)
- 52.223-5 - Pollution Prevention and Right-To-Know Information (APR 1998)
- 52.223-6 - Drug-Free Workplace (JAN 1997)
- 52.223-14 - Toxic Chemical Release Reporting (OCT 1996)
- 52.225-10 - Duty-Free Entry (APR 1984)
- 52.225-11 - Restrictions On Certain Foreign Purchases (OCT 1996)
- 52.227-1 - Authorization And Consent (JUL 1995)
- 52.227-2 - Notice And Assistance Regarding Patent And Copyright Infringement (AUG 1996)
- 52.227-3 - Patent Indemnity (APR 1984)
- 52.228-5 - Insurance - Work on a Government Installation (JAN 1997)
- 52.229-3 - Federal, State, And Local Taxes (JAN 1991)
- 52.229-5 - Taxes - Contracts Performed In U.S. Possessions Or Puerto Rico (APR 1984)
- 52.230-2 - Cost Accounting Standards (APR 1998)
- 52.230-6 - Administration Of Cost Accounting Standards (APR 1996)
- 52.232-1 - Payments (APR 1984)
- 52.232-8 - Discounts For Prompt Payment (MAY 1997)
- 52.232-9 - Limitation On Withholding Of Payments (APR 1984)
- 52.232-11 - Extras (APR 1984)
- 52.232-17 - Interest (JUN 1996)
- 52.232-18 - Availability Of Funds (APR 1984)
- 52.232-23 - Assignment Of Claims (JAN 1986)
- 52.232-25 - Prompt Payment (JUN 1997)
- 52.232-33 - Mandatory Information For Electronic Funds Transfer Payment (AUG 1996)
- 52.233-1 - Disputes (OCT 1995)
- 52.233-3 - Protest After Award (AUG 1996)
- 52.237-2 - Protection Of Government Buildings, Equipment, And Vegetation (APR 1984)
- 52.242-13 - Bankruptcy (JUL 1995)
- 52.243-1 - Changes - Fixed Price (AUG 1987)
- 52.244-5 - Competition In Subcontracting (DEC 1996)
- 52.245-2 - Government Property (Fixed-Price Contracts) (DEC 1989)
- 52.245-9 - Use And Charges (APR 1984)(DEVIATION)
- 52.245-17 - Special Tooling (DEC 1989)DEVIATION
- 52.246-24 - Limitation Of Liability - High-Value Items (FEB 1997)
- 52.246-25 - Limitation Of Liability - Services (FEB 1997)
- 52.248-1 - Value Engineering (MAR 1989)
- 52.249-2 - Termination For Convenience Of The Government (Fixed Price)(SEP1996)
- 52.249-8 - Default (Fixed-Price Supply And Service) (APR 1984)
- 52.252-6 - Authorized Deviations in Clauses (APR 1984) fill in Defense Federal Acquisition Regulation Supplement (48 CFR- Chapter 2)
- 52.253-1 - Computer Generated Forms (JAN 1991)

**DFARS CLAUSE TITLE**

- 252.201-7000 - Contracting Officer's Representative (DEC 1991)
- 252.203-7001 - Special Prohibition On Employment (JUN 1997)
- 252.204-7002 - Payment For Subline Items Not Separately Priced (DEC 1991)
- 252.204-7003 - Control Of Government Personnel Work Product (APR 1992)
- 252.204-7004 - Required Central Contractor Registration (MAR 1998)

- 252.209-7000 - Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate-Range Nuclear Forces (INF) Treaty (NOV 1995)
- 252.209-7003 - Compliance with Veteran's Employment Reporting Requirements (MAR 1998)
- 252.209-7004 - Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (MAR 1998)
- 252.225-7001 - Buy American Act And Balance Of Payments Program (MAR 1998)
- 252.225-7002 - Qualifying Country Sources As Subcontractors (DEC 1991)
- 252.225-7009 - Duty-Free Entry - Qualifying Country Supplies (End Products And Components)(MAR 1998)
- 252.225-7010 - Duty-Free Entry - Additional Provisions (MAR 1998)
- 252.225-7012 - Preference for Certain Domestic Commodities (SEP 1997)
- 252.225-7025 - Restriction on Acquisition of Forgings (JUN 1997)
- 252.225-7031 - Secondary Arab Boycott Of Israel (JUN 1992)
- 252.227-7013 - Rights In Technical Data--Noncommercial Items (NOV 1995)
- 252.227-7014 - Rights In Noncommercial Computer Software And Noncommercial Computer Software Documentation (JUN 1995) - Alternate I (JUN 1995)
- 252.227-7016 - Rights In Bid or Proposal Information (JUN 1995)
- 252.227-7026 - Deferred Delivery Of Technical Data Or Computer Software (APR 1988)
- 252.227-7027 - Deferred Ordering Of Technical Data Or Computer Software (APR 1988)
- 252.227-7030 - Technical Data--Withholding Of Payment (OCT 1988)
- 252.227-7036 - Certification Of Technical Data Conformity (JAN 1997)
- 252.227-7037 - Validation Of Restrictive Markings On Technical Data (NOV 1995)
- 252.233-7000 - Certification Of Claims And Requests For Adjustment Or Relief (MAY 1994)
- 252.242-7000 - Postaward Conference (DEC 1991)
- 252.243-7001 - Pricing Of Contract Modifications (DEC 1991)
- 252.243-7002 - Requests for Equitable Adjustment (MAR 1998)
- 252.245-7001 - Reports of Government Property (MAY 1994)
- 252.246-7001 - Warranty Of Data (DEC 1991)
- 252.247-7023 - Transportation Of Supplies By Sea (NOV 1995)
- 252.247-7024 - Notification Of Transportation Of Supplies By Sea (NOV 1995)
- 252.248-7000 - Preparation of Value Engineering Change Proposals (MAY 1994)

**I-2 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (JUN 1996)****(a) Definitions.**

"Ozone-depleting substance", as used in this clause, means any substance designated as Class I by the Environmental Protection Agency (EPA) (40 CFR Part 82), including but not limited to chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or any substance designated as Class II by EPA (40 CFR Part 82), including but not limited to hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

"WARNING: Contains (or manufactured with, if applicable) \_\_\_\_\_, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere."

\* The Contractor shall insert the name of the substance(s).

**I-3 DFARS 252.225-7008 - SUPPLIES TO BE ACCORDED DUTY- FREE ENTRY (MAR 1998)**

In accordance with paragraph (b) of the Duty-Free Entry-clause of this contract, in addition to duty free entry for all qualifying country supplies (end products and components) and all eligible end products subject to applicable trade agreements (if this contract contains the Buy American Act-Trade Agreements-Balance of Payments Program clause or the Buy American Act – North American Free Trade Agreement Implementation Act- Balance of Payments Program clause), the following foreign end products that are neither qualifying country end products nor eligible end products under a trade agreement, and the following nonqualifying country components, are accorded duty-free entry:

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**PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS**

**SECTION J**

**LIST OF ATTACHMENTS**

**J-1 Attachment (1) – Specifications – 2 Pages, with Exhibit A- DD Form 1423, Contract Data Requirements List – 1 Page.**

**PART IV - REPRESENTATIONS AND INSTRUCTIONS****SECTION K****REPRESENTATIONS, CERTIFICATIONS  
AND OTHER STATEMENTS OF OFFEROR OR RESPONDENTS**

**K-1** The following Representations, Certifications, and Other Statements Of Offerors are incorporated by reference with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

**FAR CLAUSE      TITLE**

52.203-11 - Certification And Disclosure Regarding Payments To Influence Certain Federal Transactions (APR 1991)

**DFARS CLAUSE      TITLE**

252.209-7001 - Disclosure Of Ownership Or Control By The Government Of A Terrorist Country (MAR 1998)

**K-2** FAR 52.204-3 - TAXPAYER IDENTIFICATION (JUN 1997)

(a) *Definitions.*

"Common parent," as used in the solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

"Corporate status," as used in this solicitation provision, means a designation as to whether the offeror is a corporate entity, an unincorporated entity, (e.g., sole proprietorship or partnership), or corporation providing medical and health care services.

"Taxpayer Identification Number (TIN)," as used in this solicitation provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns.

(b) All offerors are required to submit the information required in paragraphs (c) through (e) of this solicitation provision in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to reporting requirements described in FAR 4.903, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) *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 U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;

Offeror is an agency or instrumentality of a foreign government;

Offeror is an agency or instrumentality of a Federal, state, or local government;

Other. State basis. \_\_\_\_\_

(d) *Corporate Status.*

Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;

Other corporate entity;

Not a corporate entity;

Sole proprietorship

Partnership

Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).

(e) *Common Parent.*

Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this clause.

Name and TIN of common parent:

Name \_\_\_\_\_

TIN \_\_\_\_\_

**K-3 FAR 52.203-2 - CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)**

(a) The offeror certifies that:

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices; (ii) the intention to submit an offer; or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory:

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision; or

(2) (i) Has been authorized, in writing to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision

\_\_\_\_\_ [insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization];

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) of this provision have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) of this provision.

(c) If the offeror deletes or modifies subparagraph (a)(2) of this provision, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

**K-4 FAR 52.204-5 - WOMEN-OWNED BUSINESS (OCT 1995)**

(a) *Representation.* The offeror represents that it  is,  is not a women-owned business concern.

(b) *Definition.* "Women-owned business concern," as used in this provision, 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 the stock of which is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

**K-5 FAR 52.207-4 - ECONOMIC PURCHASE QUANTITY--SUPPLIES (AUG 1987)**

(a) Offerors are invited to state an opinion on whether the quantity(ies) of supplies on which bids, proposals or quotes are requested in this solicitation is (are) economically advantageous to the Government.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(b) Each offeror who believes that acquisitions in different quantities would be more advantageous is invited to recommend an economic purchase quantity. If different quantities are recommended, a total and a unit price must be quoted for applicable items. An economic purchase quantity is that quantity at which a significant price break occurs. If there are significant price breaks at different quantity points, this information is desired as well.

OFFEROR RECOMMENDATIONS

<u>ITEM</u>	<u>QUANTITY</u>	<u>PRICE QUOTATION</u>	<u>TOTAL</u>

(c) The information requested in this provision is being solicited to avoid acquisitions in disadvantageous quantities and to assist the Government in developing a data base for future acquisitions of these items. However, the Government reserves the right to amend or cancel the solicitation and resolicit it with respect to any individual item in the event quotations received and the Government's requirements indicate that different quantities should be acquired.

**K-6 FAR 52.209-5 - CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (MAR 1996)**

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that-

(i) The Offeror and/or any of its Principals:

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

(B) Have  have not , within a 3-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 public (Federal, state, or local) 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

(C) Are  are not  presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision. The Offeror and/or any of its Principals-

(ii) The Offeror has  has not , within a 3-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror non-responsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

**K-7 FAR 52.215-4 -TYPE OF BUSINESS ORGANIZATION (OCT 1997)**

The offeror or respondent, by checking the applicable box, represents that -

(a) It operates as  an individual,  a partnership,  a nonprofit organization,  a joint venture, or  a corporation incorporated under the laws of the State of \_\_\_\_\_.

(b) If the offeror or respondent is a foreign entity, it operates as  an individual,  a partnership,  a nonprofit organization,  a joint venture, or  a corporation, registered for business in \_\_\_\_\_.  
(country)

**K-8 FAR 52.215-6 -PLACE OF PERFORMANCE (OCT 1997)**

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation,  intends,  does not intend [check applicable block] to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks “intends” in paragraph (a) of this provision, it shall insert in the following spaces the required information:

PLACE OF PERFORMANCE  
(STREET ADDRESS, CITY,  
STATE, COUNTY, ZIP CODE)

NAME AND ADDRESS OF OWNER  
AND OPERATOR OF THE PLANT  
OR FACILITY IF OTHER THAN  
OFFEROR OR RESPONDENT

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**K-9 FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (FEB 1998)**

(a) (1) The standard industrial classification (SIC) code for this acquisition is 3826.

(2) The small business size standard is 500 employees

(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) *Representation.*

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

(2) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision) The offeror represents as part of its offer that it  is,  is not a small disadvantaged business concern.

(3) (Complete only if offeror represented itself as a small business concern in paragraph (b)(1) of this provision) The offeror represents as part of its offer that it  is,  is not a women-owned small business concern.

(c) *Definitions.* “Small business concern”, as used in this provision, 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 CFR Part 121 and the size standard in paragraph (a) of this provision.

“Small disadvantaged business concern”, as used in this provision, means a small business concern that (1) is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals, and (2) has its management and daily business controlled by one or more such individuals. This term also means a small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned business having at least 51 percent of its stock unconditionally owned by one or more of these entities, which has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and which meets requirements of 13 CFR Part 124.

“Women-owned small business concern”, as used in this provision, means a small business concern -

(1) 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 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.

(d) *Notice.*

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small or small disadvantaged business concern in order to obtain a contract to be awarded under the preference programs established pursuant to sections 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall --

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

**K-10 FAR 52.222-22 - PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (APR 1984)(DEVIATION)--**

The offeror represents that-

(a) It  has,  has not participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of

Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114;

(b) It  has,  has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

**K-11 FAR 52.222-25 - AFFIRMATIVE ACTION COMPLIANCE (APR 1984)**

The offeror represents that (a) it  has developed and has on file,  has not developed and does not have on file, at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or (b) it  has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

**K-12 FAR 52.223-1 - CLEAN AIR AND WATER CERTIFICATION (APR 1984)**

The Offeror certifies that--

(a) Any facility to be used in the performance of this proposed contract is , is not  listed on the Environmental Protection Agency List of Violating Facilities;

(b) The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the Offeror proposes to use for the performance of the contract is under consideration to be listed on the EPA List of Violating Facilities; and

(c) The Offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract.

**K-13 FAR 52.223-13 - CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 1996)**

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(B) By signing this offer, the offeror certifies that --

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (*Check each block that is applicable*)

- (i) The facility does not manufacture, process, or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);
- (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);
- (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);
- (iv) The facility does not fall within Standard Industrial Classification Code (SIC) designations 20 through 39 as set forth in section 19.102 of the Federal Acquisition Regulation; or
- (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

**K-14 FAR 52.227-6 - ROYALTY INFORMATION (APR 1984)**

(a) *Cost or charges for royalties.* When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:

- (1) Name and address of licensor.
- (2) Date of license agreement.
- (3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
- (4) Brief description, including any part or model numbers of each contract item or component on which the royalty is payable.
- (5) Percentage or dollar rate of royalty per unit.
- (6) Unit price of contract item.
- (7) Number of units.
- (8) Total dollar amount of royalties.

(b) *Copies of current licenses.* In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

**K-15 DFARS 252.219-7000 - SMALL DISADVANTAGED BUSINESS CONCERN REPRESENTATION (DOD CONTRACTS) (JUN 1997)**

(a) *Definition.*

Small disadvantaged business concern, as used in this provision, means a small business concern, owned and controlled by individuals who are both socially and economically disadvantaged, as defined by the Small Business Administration at 13 CFR Part 124, the

majority of earnings of which directly accrue to such individuals. This term also means a small business concern owned and controlled by an economically disadvantaged Indian tribe or Native Hawaiian organization which meets the requirements of 13 CFR Part 124.112 or 124.113, respectively. In general, 13 CFR Part 124 describes a small disadvantaged business concern as a small business concern--

- (1) Which is at least 51 percent unconditionally owned by one or more socially and economically disadvantaged individuals; or
- (2) In the case of any publicly owned business, at least 51 percent of the voting stock of which is unconditionally owned by one or more socially and economically disadvantaged individuals; and
- (3) Whose management and daily business operations are controlled by one or more such individuals.

(b) *Representations.*

Check the category in which your ownership falls--

\_\_\_\_\_ Subcontinent Asian (Asian-Indian) American (U.S. citizen with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal)

\_\_\_\_\_ Asian-Pacific American (U.S. Citizen with origins from Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, U.S. Trust Territory of the Pacific Islands (Republic of Palau), the Northern Mariana Islands, Laos, Kampuchea (Cambodia), Taiwan, Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Republic of the Marshall Islands, the Federated States of Micronesia, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru)

\_\_\_\_\_ Black American (U.S. Citizen)

\_\_\_\_\_ Hispanic American (U.S. Citizen with origins from South America, Central America, Mexico, Cuba, the Dominican Republic, Puerto Rico, Spain, or Portugal)

\_\_\_\_\_ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians including Indian tribes or Native Hawaiian organizations)

\_\_\_\_\_ Individual/concern, other than one of the preceding, currently certified for participation in the Minority Small Business and Capital Ownership Development Program under Section 8(a) of the Small Business Act

\_\_\_\_\_ Other

(c) *Certifications.*

Complete the following--

- (1) The Offeror is \_\_\_ is not \_\_\_ a small disadvantaged business concern.

- (2) The Small Business Administration (SBA) has \_\_\_ has not\_\_\_ made a determination concerning the offeror's status as a small disadvantaged business concern. If the SBA has made a determination, the date of the determination was \_\_\_\_\_ and the Offeror--

\_\_\_Was found by SBA to be socially and economically disadvantaged and no circumstances have changed to vary that determination.

\_\_\_Was found by SBA not to be socially and economically disadvantaged but circumstances which caused the determination have changed.

(d) *Penalties and Remedies.*

Anyone who misrepresents the status of a concern as a small disadvantaged business for the purpose of securing a contract or subcontract shall--

- (1) Be punished by imposition of a fine, imprisonment, or both;
- (2) Be subject to administrative remedies, including suspension and debarment; and
- (3) Be ineligible for participation in programs conducted under authority of the Small Business Act.

**K-16** DFARS 252.219-7006 - NOTICE OF EVALUATION PREFERENCE FOR SMALL DISADVANTAGED BUSINESS CONCERNS (JUN 1997)

(a) *Definitions.*

"Historically black colleges and universities," as used in this clause, means institutions determined by the Secretary of Education to meet the requirements of 34 CFR Section 608.2. The term also means any nonprofit research institution that was an integral part of such a college or university before November 14, 1986.

"Minority institutions," as used in this clause, means institutions meeting the requirements of paragraphs (3), (4), and (5) of Section 1046(3) of the Higher Education Act of 1965 (20 U.S.C. 1135d-5(3)). The term also includes Hispanic-serving institutions as defined in Section 316(b)(1) of such Act (20 U.S.C. 1059c(b)(1)).

"Small disadvantaged business concern", as used in this clause, means a small business concern, owned and controlled by individuals who are both socially and economically disadvantaged, as defined by the Small Disadvantaged Business Administration at 13 CFR Part 124, the majority of earnings of which directly accrue to such individuals. This term also means a small business concern owned and controlled by an economically disadvantaged Indian tribe or Native Hawaiian organization which meets the requirements of 13 CFR 124.112 or 13 CFR 124.113, respectively.

"United States," as used in this clause, means the United States, its territories and possessions, the Commonwealth of Puerto Rico, the U.S. Trust Territory of the Pacific Islands, or the District of Columbia.

(b) *Evaluation preference.*

- (1) Offers will be evaluated by adding a factor of ten percent to the price of all offers, except--
    - (i) Offers from small disadvantaged business concerns, which have not waived preference;
    - (ii) Offers from historically black colleges and universities or minority institutions, which have not waived the preference;
    - (iii) Otherwise successful offers of--
      - (A) Eligible products under the Trade Agreements Act as when the dollar threshold for application of the Act is exceeded;
      - (B) Qualifying country end products (as defined in the Defense Federal Acquisition Regulations Supplement clause at 252.225-7001, Buy American Act and Balance of Payments Program); and
    - (iv) Offers where application of the factor would be inconsistent with a Memorandum of Understanding or other international agreement with a foreign government.
  - (2) The ten percent factor will be applied on a line item by line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation will be applied before application of the ten percent factor. The ten percent factor will not be applied if using the preference would cause the contract award to be made at a price which exceeds the fair market price by more than ten percent.
- (c) *Waiver of evaluation preference.*  
A small disadvantaged business, historically black college or university, or minority institution offeror may elect to waive the preference, in which case the ten percent factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) do not apply to offers which waive the preference.
- \_\_\_\_\_ Offeror elects to waive the preference
- (d) *Agreements.*
- (1) A small disadvantaged business concern, historically black college or university, or minority institution offeror, which did not waive the preference, agrees that in performance of the contract in the case of a contract for --
    - (i) Services, except construction, at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern.
    - (ii) Supplies, (other than procurement from a regular dealer in such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern.

- (iii) General construction, at least 15 percent of the cost of the contract, excluding the cost of materials, will be performed by employees of the concern.
  - (iv) Construction by special trade contractors, at least 25 percent of the cost of the contract, excluding the cost of materials, will be performed by employees of the concern.
- (2) A small disadvantaged business, historically black college or university, or minority institution regular dealer submitting an offer in its own name agrees to furnish in performing this contract only end items manufactured or produced in the United States by small disadvantaged business concerns, historically black colleges or universities, or minority institutions.
  - (3) Upon request, a historically black college or university or minority institution offeror will provide the Contracting Officer evidence that it has been determined to be an HBCU or MI by the Secretary of Education.

ALTERNATE I (JUN 1997)

- (d) (2) A small disadvantaged business, historically black college or university, or minority institution regular dealer submitting an offer in its own name agrees to furnish in performing this contract only end items manufactured or produced in the United States by small business concerns, historically black colleges or universities, or minority institutions.

**K-17** DFARS 252.225-7000 - BUY AMERICAN ACT - BALANCE OF PAYMENTS PROGRAM  
CERTIFICATE (DEC 1991)

(a) *Definitions.*

“Domestic end product”, “qualifying country”, “qualifying country end product,” and “nonqualifying country end product” have the meanings given in the Buy American Act and Balance of Payments Program clause of this solicitation.

(b) *Evaluation.*

Offers will be evaluated by giving preference to domestic end products and qualifying country end products over nonqualifying country end products.

(c) *Certifications.*

(1) The Offeror certifies that--

- (i) Each end product, except those listed in paragraphs (c)(2) or (3) of this clause, is a domestic end product; and
- (ii) Components of an unknown origin are considered to have been mined, produced, or manufactured outside the United States or a qualifying country.

(2) The Offeror certifies that following end products are qualifying country end products:

QUALIFYING COUNTRY END PRODUCTS

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

(List only qualifying country end products)

(3) The offeror certifies that the following end products are nonqualifying country end products:

NONQUALIFYING COUNTRY END PRODUCTS

Line Item No.	Country of Origin (If known)
_____	_____
_____	_____
_____	_____
_____	_____

**K-18** DFARS 252.225-7003 - INFORMATION FOR DUTY-FREE ENTRY EVALUATION (MAR 1998)

- (a) Does the offeror propose to furnish—
- (1) A domestic end product with nonqualifying country components for which the offeror requests duty-free entry; or
  - (2) A foreign end product consisting of end items, components, or material of foreign origin other than those for which duty-free entry is to be accorded pursuant to the Duty-Free--Qualifying Country Supplies (End Products and Components) clause or, if applicable, the Duty Free Entry—Eligible End Products clause of this solicitation?

YES ( )                      NO ( )

(b) If the answer in paragraph (a) is yes, answer the following questions:

- (1) Are such foreign supplies now in the United States?

YES ( )                      NO ( )

(2) Has the duty on such foreign supplies been paid?

YES ( )

NO ( )

(3) If the answer to paragraph (b)(2) is no, what amount is included in the offer to cover such duty? \$\_\_\_\_\_.

(b) If the duty has not been paid, the Government may elect to make award on a duty-free basis. If so, the offered price will be reduced in the contract award by the amount specified in paragraph (b)(3). The Offeror agrees to identify, at the request of the Contracting Officer, the foreign supplies which are subject to duty-free entry.

**K-19 DFARS 252.247-7022 - REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)**

(a) The Offeror shall indicate by checking the appropriate blank in paragraph(b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term "supplies" is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) *Representation.*

The Offeror represents that it--

\_\_\_\_\_ Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

\_\_\_\_\_ Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notice of Transportation of Supplies by Sea.

**K-20 COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING**

The Offeror's CAGE Code is \_\_\_\_\_.

See DFARS 252.204-7001 in Section L for procedures on requesting a CAGE Code.

## SECTION L

## INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS OR RESPONDENTS

**L-1 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)**

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

<http://www-far.npr.gov/References/References.html>

<http://heron.nrl.navy.mil/contracts/home.htm>

**FAR CLAUSE    TITLE**

52.204-6		Data Universal Numbering System (DUNS) Number (APR 1998)
52.214-34	-	Submission Of Offers In The English Language (APR 1991)
52.214-35	-	Submission Of Offers In U.S. Currency (APR 1991)
52.215-1	-	Instructions to Offerors- Competitive Acquisition (OCT 1997)
52.215-1	-	Instructions to Offerors- Competitive Acquisition (OCT 1997) Alternate II (OCT 1997)
52.215-5	-	Facsimile Proposals (OCT 1997)
52.215-16	-	Facilities Capital Cost Of Money (OCT 1997)
52.237-1		Site Visit (APR 1984)

**L-2 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)**

(a) *Exceptions from cost or pricing data.* (1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) *Identification of the law or regulation establishing the price offered.* If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) *Commercial item exception.* For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying

office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities.

(B) For market priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) *Requirements for cost or pricing data.* If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall prepare and submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed in FAR 15.406-2.

**L-3 FAR 52.211-14 - NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)**

Any contract awarded as a result of this solicitation will be a DO rated order for national use under the Defense Priorities and Allocation System (DPAS) and the Contractor will be required to follow all of the requirements of this regulation.

**L-4 FAR 52.216-1 - TYPE OF CONTRACT (APR 1984)**

The Government contemplates award of a Firm Fixed Price Supply contract resulting from this solicitation.

**L-5 FAR 52.233-2 - SERVICE OF PROTEST (AUG 1996)**

(a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO) shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from the Control Desk, Code 3200, Bldg. 222, Rm. 115, Naval Research Laboratory, 4555 Overlook Ave., S.W., Washington DC 20375-5326.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

**L-6 DFARS 252.204-7001 - COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (DEC 1991)**

- (a) The Offeror is requested to enter its CAGE code on its offer in the block with its name and address. The CAGE code entered must be for that name and address. Enter CAGE Before the number.
- (b) If the Offeror does not have a CAGE code, it may ask the Contracting Officer to request one from the Defense Logistics Services Center (DLSC). The Contracting Officer will--
  - (1) Ask the Contractor to complete section B of a DD Form 2051, Request for Assignment of the Commercial and Government Entity (CAGE) Code;
  - (2) Complete section A and forward the form to DLSC; and
  - (3) Notify the Contractor of its assigned CAGE code.
- (c) Do not delay submission of the offer pending receipt of a CAGE code.

**L-7 DFARS 252.227-7017 - IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS (JUN 1995)**

- (a) The terms used in this provision are defined in following clause or clauses contained in this solicitation--
  - (1) If a successful offeror will be required to deliver technical data, the Rights in Technical Data--Noncommercial Items clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.
  - (2) If a successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.
- (b) The identification and assertion requirements in this provision apply only to technical data, including computer software documents, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the Small Business Innovative Research Program, the notification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.
- (c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure.

- (d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software.

The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:

Technical Data or Computer Software to be Furnished With Restrictions*	Basis for Assertion**	Asserted Rights Category***	Name of Person Asserting Restrictions****
(LIST)*****.	(LIST)	(LIST)	(LIST)

\* For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such items, component, or process. For computer software or computer software documentation identify the software or documentation.

\*\* Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.

\*\*\* Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).

\*\*\*\* Corporation, individual, or other person, as appropriate.

\*\*\*\*\* Enter "none" when all data or software will be submitted without restrictions.

Date \_\_\_\_\_

Printed Name and Title \_\_\_\_\_

Signature \_\_\_\_\_

(End of identification and assertion)

- (e) An offeror's failure to submit, complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible for award.
- (f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

**L-8 DFARS 252.227-7028 - TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT (JUN 1995)**

The Offeror shall attach to its offer an identification of all documents or other media incorporating technical data or computer software it intends to deliver under this contract with other than unlimited rights that are identical or substantially similar to documents or other media that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract. The attachment shall identify - -

- (a) The contract number under which the data or software were produced;
- (b) The contract number under which, and the name and address of the organization to whom, the data or software were most recently delivered or will be delivered; and
- (c) Any limitations on the Government's rights to use or disclose the data or software, including, when applicable, identification of the earliest date the limitations expire.

**L-9 GOVERNMENT-FURNISHED PROPERTY**

No material, labor, or facilities will be furnished by the Government unless provided for in the solicitation.

**L-10 INQUIRIES CONCERNING THE RFP**

Any questions concerning the RFP must be submitted in writing to the Contracting Officer at the location noted in blocks 7 and 9 of the Standard Form 33, "Solicitation, Offer and Award," no less than fifteen (15) days before closing. The Government will not consider questions received after this date. Offerors are cautioned against directing any questions concerning this RFP to technical personnel at the Naval Research Laboratory.

**L-11 CRITERIA FOR ALTERNATE PROPOSALS**

Proposals submitted in response to this solicitation are not limited to the items listed in Section B. Offerors are encouraged to submit alternate proposals that offer significant beneficial improvements and meet the minimum needs of the Government. The alternate proposal will be

evaluated in accordance with the evaluation criteria. The Government reserves the right to award a contract based upon an alternate proposal which meets the Government's technical requirements and is otherwise awardable in accordance with the evaluation and award criteria.

**L-12 INSTRUCTIONS FOR SUBMISSION AND INFORMATION REQUIRED TO EVALUATE PROPOSALS**

**PART A - TECHNICAL PROPOSAL**

(1) Information for the technical proposal shall be placed in Volume I and be completely separate from the cost/price proposal (Volume II).

(2) Required Copies 3

(3) Proposal Identification/Mailing - The proposal should be packaged for delivery so as to permit safe and timely arrival at destination. The proposal package should be sent to the address shown in Block 7 of the RFP face page and marked:

**RFP No. N00173-98-R-KK01**

**Closing Date:**

**(As specified in Block 9, RFP face page)**

Attn: Code 3220.KK

(4) The following information is required for evaluation of your technical proposal. Any additional information may be provided.

(a) The technical proposal must demonstrate an understanding of all requirements covered in the RFP's terms and conditions. The proposal must be sufficiently detailed and complete to demonstrate an understanding of and an ability to comply with the requirements of the RFP's Statement of Work or Specifications. General statements that the offeror can or will comply with the requirements, that standard procedures will be used, that well known techniques will be used, or paraphrases of the RFP's Statement of Work or Specification in whole or in part will not constitute compliance with these requirements concerning the content of the technical proposal. Failure to conform to any of the requirements of the RFP may form the basis for rejection of the proposal.

(b) The following additional information is required:

1. A listing of recent Department of Defense or other Government or commercial contracts under which the offeror has furnished identical or similar products. Also, a statement of names and telephone numbers of customers and technical personnel involved in the contract.

2. A statement of the offeror's percentage of sales with the Government and its percentage of sales with the commercial sector last year.

3. Demonstrate that the supplies or services you propose to provide comply with

the Specifications/Statement of Work and discuss the reasons for any exceptions.

**PART B - COST/PRICE PROPOSAL**

(1) The cost/price proposal shall be in Volume II and be completely separate from the technical and management proposal (Volume I).

(2) Required Copies 3

**SECTION M**

**EVALUATION FACTORS FOR AWARD**

**M-1 EVALUATION**

- (a) Technical proposals will be evaluated on demonstrated compliance with the requirements of the solicitation.
- (b) Award will be made to that responsible offeror proposing the lowest price for the Supplies or Services that has been determined to comply with the requirements of the solicitation.

**M-2 AWARD BY FULL QUANTITY**

An offeror must propose on all items in this solicitation to be eligible for award. Award will be made to that responsible offeror proposing the lowest total price for all items.

## **Specifications**

### **Solid Freeform Fabrication/Rapid Prototyping System for Ceramics and Metals**

It is desired to procure a solid freeform fabrication/rapid prototyping (SFF/RP) system capable of producing green (unfired) near net shape preform of both ceramic and metal powders. The system should provide this capability using the ceramic and metal powders in the form of tape precursors. These tape precursors consist of ceramic or metal powders combined with organic binders in the form of tapes-thin sheets of material typically 0.0005" to 0.008" in thickness, up to 28" in width and typically supplied in the form of continuous rolls. The system should be designed to produce green preforms as large as 32" in length, 22" in width, and 20" in height, with weights up to 450 lb.

This system, which will be computer controlled and is provided with numerical input files for product designs, shall include the necessary computer hardware and software for operation and generation of the necessary input data for the system (or obtaining data from other computers via internet). A minimum requirement for the computer facilities for the system shall include two Pentium II workstations with the necessary hardware and software to accomplish the system operation, input data generation and ancillary tasks. Such workstations are as follows: 300 Mhz Pentium II processor, 4 GB ultrawide SCSI (small computer system interface) hard drive with SCSI controller card, 64 MB RAM (random access memory), 4 MB VRAM (video RAM) with 3-D, 64 bit graphics accelerator card, 3.5" internal floppy drive, 100 MB internal Zip drive, 24-30X internal CD-ROM drive, built-in ethernet capability, 17" or greater size, high resolution (0.25 mm dot pitch) color monitor, keyboard with trackball, system and application software including Windows NT and Microsoft Office for NT, software (e.g., AutoCAD, ProEngineer) for generating .STL files from other descriptions of solid objects or from numerical analysis codes (e.g., ABAQUS, ANSYS), and software for generating the motion control commands for the system, including facet smoothing, beam offset, and beam tilting. The latter two software packages shall operate under the Windows NT shell.

The SFF/RP system will include several subsystems; these include: a subsystem for cutting the tapes on the bed of the system using a CO<sub>2</sub> laser; a subsystem for moving the laser cutting head in the X-Y plane, and for moving the bed in the Z-direction; a subsystem for handling and feeding the tapes from a roll onto the bed of the system, and a subsystem for laminated the cut tapes on the bed of the machine. These will be described separately below.

The tape cutting system shall employ a CO<sub>2</sub> laser for tape cutting; the laser shall be of at least 50 W power to provide adequate cutting speed. The laser should be provided with a self-contained chlorofluorocarbon and water cooling system, and should also be provided with all necessary shields and interlocks to meet current Federal safety standards. The laser and accompanying optical system shall permit focusing the laser beam to a spot diameter at the tape on the bed of 0.008-0.010" or smaller.

The motion control subsystem must provide capability to control the motion of the laser head during the cutting process and provide for vertical motion of the bed as more tape layers are added to the green preform. This subsystem shall be based on a brushless, servo based X-Y

motion system with cutting speeds up to 20"/second, and should be a closed-loop system to provide for motion accuracy and repeatability of 0.002" or better. The motion control system for the laser cutting head should also provide for beam tilting up to  $\pm 60^\circ$  to permit tangent cutting of tapes for better surface finish and to permit utilization of thicker tapes for higher process speed. The Z-axis motion control system needs to be capable of speeds up to 1"/second, with a motion control accuracy of 0.002" as well, with an accuracy of 0.0005" preferred if feasible.

The tape feed subsystem shall be capable of handling standard ceramic and metal tapes, which may vary in thickness from 0.0005" to 0.008". The subsystem should also be capable of handling tape rolls as wide as 28", and tape rolls as large as 14" in diameter. The latter is to ensure the capability for producing large green preforms from a single tape roll.

The lamination subsystem is required to consolidate the green preform as deposited on the machine bed sufficiently that subsequent processing steps (binder burnout, sintering) can be accomplished successfully, and to ensure that the tape layers deposited during the fabrication process are sufficiently well bonded that no delamination defects will be present in the final part. The lamination subsystem should provide for fuser temperatures from 150°F to 750°F to accommodate the range of organic binders used, and a lamination force up to 40 lb. The lamination subsystem shall be designed to be compatible with the standard binders used in commercially available ceramic and metal tapes.

In addition to the various subsystems as noted above, the vendor is to provide materials and supplies for operation, maintenance, system evaluation and development efforts. These shall include standard LOM (laminated object manufacturing) paper (equivalent to Helisys LPS 038) in width of 13.5", 18", and 27" (one 50 lb. roll of each) and high performance LOM papers (equivalent to Helisys LPH 042 in widths of 14", 24", and 28" (one 50 lb. roll of each). These are intended for machine evaluation, operator training and system demonstration purposes. The vendor should also provide tapes of other ceramic and metal powders as useful for research and development purposes, including lead zirconate titanate, PZT5 and PZT8 (or equivalent) tapes, 4", 6" and 12" in width, in rolls of approx. 50 lb., aluminum oxide (Baikowski CR10 or equivalent) tapes of similar size, stainless steel (304, 316) tapes of similar size, and titanium (Ti-6V-4Al or equivalent) in similar size. The vendor shall provide also all necessary operating and maintenance supplies necessary for the first year of operation of the system, including an additional part platform for the system, and a digital laser power meter to permit verification of laser output power.

The vendor shall provide, together with the system delivered, all necessary user's manuals for the various subsystems and for the computer software supplied with the system. The vendor should provide or shall have available, as built engineering drawings or blueprints for the various system components, as might be required for machine repair or subsequent modification. The vendor is required to offer the Government at least the same warranty terms, including offers of extended warranties, offered to the general public in customary commercial practice. The vendor shall provide for on-site installation, set-up and system check, including shipping of system to the NRL site. NRL should be notified at least 14 days prior to the estimated shipping date to provide for NRL site preparation. The vendor shall provide three days of on-site (at NRL) training for three individuals following system installation and set-up, and for one week of training subsequently for three individuals at the vendor's site.

# CONTRACT DATA REQUIREMENTS LIST

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 440 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO. 0005			B. EXHIBIT A		C. CATEGORY: TDP _____ TM. _____ OTHER _____		
D. SYSTEM / ITEM			E. CONTRACT / PR NO.		F. CONTRACTOR		
1. DATA ITEM NO. A001	2. TITLE OF DATA ITEM Users Manual for each subsystem				3. SUBTITLE		
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE Specification		6. REQUIRING OFFICE NRL Code 6384		
7. DD 250 REQ LT	8. DIST STATEMENT REQUIRED	10. FREQUENCY Otime		12. DATE OF FIRST SUBMISSION		14. DISTRIBUTION	
8. APP CODE N/A		11. AS OF DATE 180 DAC	13. DATE OF SUBSEQUENT SUBMISSION		a. ADDRESSEE	b. COPIES	
					Draft	Final	Repro
16. REMARKS Vendor to supply users manuals for each subsystem provided.					NRL Code 6384	2	
					15. TOTAL	2	
1. DATA ITEM NO. A002	2. TITLE OF DATA ITEM Users manuals for computer software				3. SUBTITLE		
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE Specification		6. REQUIRING OFFICE NRL Code 6384		
7. DD 250 REQ LT	8. DIST STATEMENT REQUIRED	10. FREQUENCY OTIME		12. DATE OF FIRST SUBMISSION		14. DISTRIBUTION	
8. APP CODE N/A		11. AS OF DATE 180 DAC	13. DATE OF SUBSEQUENT SUBMISSION		a. ADDRESSEE	b. COPIES	
					Draft	Final	Repro
16. REMARKS Vendor to supply users manuals for computer software provided.					NRL Code 6384	2	
					15. TOTAL	2	
1. DATA ITEM NO. A003	2. TITLE OF DATA ITEM Engineering Drawings/Blueprints for system components				3. SUBTITLE		
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE Specification		6. REQUIRING OFFICE NRL Code 6384		
7. DD 250 REQ LT	8. DIST STATEMENT REQUIRED	10. FREQUENCY OTIME		12. DATE OF FIRST SUBMISSION		14. DISTRIBUTION	
8. APP CODE N/A		11. AS OF DATE 180 DAC	13. DATE OF SUBSEQUENT SUBMISSION		a. ADDRESSEE	b. COPIES	
					Draft	Final	Repro
16. REMARKS Vendor to supply engineering drawings or blueprints for the various system components as might be required for repair or subsequent modification.					NRL Code 6384	1	
					15. TOTAL	1	
1. DATA ITEM NO.	2. TITLE OF DATA ITEM				3. SUBTITLE		
4. AUTHORITY (Data Acquisition Document No.)			5. CONTRACT REFERENCE		6. REQUIRING OFFICE		
7. DD 250 REQ	8. DIST STATEMENT REQUIRED	10. FREQUENCY		12. DATE OF FIRST SUBMISSION		14. DISTRIBUTION	
8. APP CODE		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION		a. ADDRESSEE	b. COPIES	
					Draft	Final	Repro
16. REMARKS					15. TOTAL		
G. PREPARED BY			H. DATE	I. APPROVED BY <i>Kevin M. Thig</i>		J. DATE 3/30/98	

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

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