

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

1. SOLICITATION NUMBER

2. (X one)

N00173-99-R-RS03

a. SEALED BID

b. NEGOTIATED (RFP)

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)

PROCURING CONTRACTING OFFICE (CODE 3250.RDS)  
NAVAL RESEARCH LABORATORY  
DEPARTMENT OF THE NAVY  
STENNIS SPACE CENTER, MS 39529-5004

4. ITEMS TO BE PURCHASED (Brief description)

RESEARCH AND DEVELOPMENT EFFORTS IN ADVANCED TECHNOLOGY FOR ELECTRO-OPTIC AND INFRARED SYSTEMS

5. PROCUREMENT INFORMATION (X and complete as applicable)

a. THIS PROCUREMENT IS UNRESTRICTED

b. THIS PROCUREMENT IS A 100 % 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.)

(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](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)

Sewell, Richard D.

b. ADDRESS (Include Zip Code)

PROCURING CONTRACTING OFFICE (CODE 3250)  
NAVAL RESEARCH LABORATORY  
STENNIS SPACE CENTER, MS 39529-5004

c. TELEPHONE NUMBER (Include Area Code and Extension) (NO COLLECT CALLS) (601) 688-5784

<b>8. REASONS FOR NO RESPONSE (X all that apply)</b>			
<input type="checkbox"/> a. CANNOT COMPLY WITH SPECIFICATIONS		<input type="checkbox"/> b. CANNOT MEET DELIVERY REQUIREMENT	
<input type="checkbox"/> c. UNABLE TO IDENTIFY THE ITEM(S)		<input type="checkbox"/> d. DO NOT REGULARLY MANUFACTURE OR SELL THE TYPE OF ITEMS INVOLVED	
<input type="checkbox"/> e. OTHER (Specify)			
<b>9. MAILING LIST INFORMATION (X one)</b>			
<input type="checkbox"/> YES	<input type="checkbox"/> NO	WE DESIRE TO BE RETAINED ON THE MAILING LIST FOR FUTURE PROCUREMENT OF THE TYPE OF TIME(S) INVOLVED.	
<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

FOLD

FOLD

FOLD

FOLD

FROM

AFFIX  
STAMP  
HERE

SOLICITATION NUMBER	
N00173-99-R-RS03	
DATE (YYMMDD)	LOCAL TIME
99 SEP 13	3:30PM

TO

<b>SOLICITATION, OFFER AND AWARD</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)		RATING <b>DO-C9</b>	PAGE OF <b>1</b>   <b>31</b> PAGES
2. CONTRACT NO.	3. SOLICITATION NO. <b>N00173-99-R-RS03</b>	4. TYPE OF SOLICITATION <input checked="" type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED <b>12 AUG 99</b>	6. REQUISITION/PURCHASE NO.
7. ISSUED BY Procuring Contracting Officer, Code 3235.RDS Naval Research Laboratory, SSC Department of the Navy Stennis Space Center, MS 39529-5004			8. ADDRESS OFFER TO (If other than Item 7)  <b>CODE N00173</b>		

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

**SOLICITATION**

9. Sealed offers in original and 05 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 Bldg. 1100, Rm 109, SSC, MS 39529-5004 until 3:30 local time 13 SEP 99  
(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:	A. NAME <b>Richard D. Sewell</b>	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS) <b>(228)688-5784</b>
---------------------------	-------------------------------------	---

**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	15-19
<input checked="" type="checkbox"/> B	SUPPLIES OR SERVICES AND PRICES/COSTS	2-3	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.		
<input checked="" type="checkbox"/> C	DESCRIPTION/SPECS./WORK STATEMENT	4	<input checked="" type="checkbox"/> J	LIST OF ATTACHMENTS	20
<input checked="" type="checkbox"/> D	PACKAGING AND MARKING	4	PART IV - REPRESENTATIONS AND INSTRUCTIONS		
<input checked="" type="checkbox"/> E	INSPECTION AND ACCEPTANCE	5	<input checked="" type="checkbox"/> K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	21
<input checked="" type="checkbox"/> F	DELIVERIES OR PERFORMANCE	6	<input checked="" type="checkbox"/> L	INSTRS., CONDS., AND NOTICES TO OFFERORS	22-29
<input checked="" type="checkbox"/> G	CONTRACT ADMINISTRATION DATA	7-10	<input checked="" type="checkbox"/> M	EVALUATION FACTORS FOR AWARD	30-31
<input checked="" type="checkbox"/> H	SPECIAL CONTRACT REQUIREMENTS	11-14			

**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)	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.		17. SIGNATURE
<b>AWARD (To be completed by Government)</b>			18. OFFER DATE

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM
<input type="checkbox"/> 10 U.S.C. 2304(c) ( ) <input type="checkbox"/> 41 U.S.C. 253(c) ( )			
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	28. AWARD DATE
		(Signature of Contracting Officer)	

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

I  
**PART I - THE SCHEDULE**  
**SECTION B**  
**SUPPLIES OR SERVICES AND PRICES/COSTS**

**B-1 SUPPLIES/SERVICES AND COSTS**

ITEM NUMBER	SUPPLIES/SERVICES	ESTIMATED COST	FIXED FEE	ESTIMATED COST PLUS FIXED FEE
0001	The Contractor shall provide the necessary personnel, equipment and facilities to accomplish the work as described in Section C.	\$	\$	\$
0002	Reports, Data, Software and Documentation in accordance with Exhibit A (DD 1423) and Attachment (1)	* NSP	* NSP	* NSP

**OPTION ONE (YEAR 2)**

0003	The Contractor shall provide the necessary personnel, equipment and facilities to accomplish the work as described in Section C.	\$	\$	\$
0004	Reports, Data, Software and Documentation in accordance with Exhibit A (DD 1423) and Attachment (1)	* NSP	* NSP	* NSP

**OPTION TWO (YEAR 3)**

0005	The Contractor shall provide the necessary personnel, equipment and facilities to accomplish the work as described in Section C.	\$	\$	\$
------	--	----	----	----

0006	Reports, Data, Software and Documentation in accordance with Exhibit A (DD 1423) and Attachment (1)	* NSP	* NSP	* NSP
------	---	-------	-------	-------

**OPTION THREE (YEAR 4)**

0007	The Contractor shall provide the necessary personnel, equipment and facilities to accomplish the work as described in Section C.	\$	\$	\$
------	--	----	----	----

0008	Reports, Data, Software and Documentation in accordance with Exhibit A (DD 1423) and Attachment (1)	* NSP	* NSP	* NSP
------	---	-------	-------	-------

<b>TOTAL ESTIMATED COST PLUS FIXED FEE:</b> (If All Options are Exercised)	\$	\$	\$
---	----	----	----

\* Not Separately Priced

**SECTION C  
DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK**

**C-1 STATEMENT OF WORK**

The work and services to be performed hereunder shall be subject to the requirements and standards contained in Attachment (1), Statement of Work, Attachment (2), Workforce Qualifications and Experience, Exhibit A, Contract Data Requirements List, all other Attachments cited in Section J, which are incorporated by reference into Section C, and the Contractor's technical proposal which may be incorporated by reference in any resulting contract.

**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 PACKAGING AND MARKING**

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

**SECTION E  
INSPECTION AND ACCEPTANCE**

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

**FAR CLAUSE TITLE**

52.246-8 - Inspection Of Research And Development - Cost Reimbursement (APR 1984)

**DFARS CLAUSE TITLE**

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

**E-2 INSPECTION AND ACCEPTANCE**

Inspection and acceptance of the final delivery will be accomplished by the Technical Manager (TM) or Contracting Officer Representative (COR) designated in Section G of this contract. 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 INCORPORATED BY REFERENCE:**

**FAR CLAUSE    TITLE**

- 52.242-15    -    Stop-Work Order (AUG 1989) - Alternate I (APR 1984)
- 52.247-34    -    F.O.B. Destination (NOV 1991)

**F-2 PERIOD AND PLACE OF PERFORMANCE**

(a) The term of this contract shall be for a period of twelve (12) months from the date of contract award. The period of performance for each subsequent option, if exercised, shall be for an additional twelve (12) month period.

(b) The principal place of performance of this contract shall be \*  
( \* To be filled in at time of award)

(The Government anticipates that 50% of the required effort will be performed on the Government's site at NRL-DC and 50% of the effort will be performed at the Contractor's site.)

**SECTION G**  
**CONTRACT ADMINISTRATION DATA**

**G-1 PROCURING OFFICE REPRESENTATIVE**

In order to expedite administration of the 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- \*

Security Matters- \*

Safety Matters- \*

Patent Matters- \*

Release of Data- \*

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.

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

**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 TECHNICAL DIRECTION MEMORANDUM (TDM)**

- (a) For the purposes of this clause, technical direction includes the following:
- (1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise describes work which will accomplish the objectives described in the statement of work;
  - (2) Guidelines to the Contractor which assist in interpretation of drawings, specifications or

technical portions of work description.

(b) Technical instructions must be within the scope of work stated in the contract. Technical instructions may not be used to:

- (1) Assign additional work under the contract;
- (2) Direct a change as defined in the contract clause entitled "Changes";
- (3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance; or
- (4) Change any of the terms, conditions or specifications of the contract

(c) The TDM shall be written by the Contracting Officer's Representative (COR), with the original given to the Contractor and a copy retained in the CORs file. Technical direction may be issued orally only in emergency situations. If technical direction is issued orally, a TDM must follow within two (2) working days from the date of the oral direction. Amendments, corrections, or changes to TDMs shall also be in written format and shall include all the information set forth in paragraph (e) below.

(d) A TDM shall be considered issued when the Government deposits it in the mail, or if transmitted by other means, when it is physically delivered to the contractor.

(e) TDMs shall include, but not be limited to, the following information:

- (1) Date of TDM,
- (2) Contract Number,
- (3) Reference to the relevant portion or item in the Statement of Work,
- (4) The specific technical direction or clarification, and
- (5) The signature of the COR.

(f) CORs shall retain all files containing TDMs for a period of two (2) years after the final contract completion date.

(g) The only individual authorized in any way to amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical direction calls for effort outside the scope of the contract or inconsistent with this special provision, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after its receipt.

**G-4 CONTRACTOR-ACQUIRED PROPERTY**

(a) The contractor is authorized to acquire the following items of facilities which are needed to accomplish this contract.

Items to be Acquired

Estimated Cost

(To be filled in at time of award)

(b) This authorization does not constitute any consent required pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2). Advance notification or requests for consent pursuant to that clause shall be directed to the administrative contracting officer (ACO).

(c) Pursuant to the contract clause entitled "Government Property (Cost-Reimbursement, Time-and-Material, or Labor-Hour Contracts)" (FAR 52.245-5), title to the property shall vest in the Government.

(d) Prior to acquisition of any item of Industrial Plant Equipment, the Contractor must comply with the

requirements of Department of Defense Federal Acquisition Regulation Supplement (DFARS 245.302-1(b)(1)(A). (See DFARS 245.301 for definition of "Industrial Plant Equipment.")

#### **G-5 SUBCONTRACTORS/CONSULTANTS**

- (a) Advance notification or requests for consent pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2) shall be directed to the cognizant administrative contracting officer (ACO).
- (b) The following subcontractors/consultants have been identified in the Contractor's proposal as necessary for performance of this contract:

Subcontractor/Consultant Name	Estimated Cost
-------------------------------	----------------

*(Paragraph (b) will be included and filled in at time of award if subcontractor/consultants are proposed by the successful offeror)*

#### **G-6 NAPS 5252.232-9001 - SUBMISSION OF INVOICES (COST-REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE (JUL 1992))**

- (a) "Invoice" as used in this clause includes contractor requests for interim payments using public vouchers (SF 1034) but does not include contractor requests for progress payments under fixed price incentive contracts.
- (b) The Contractor shall submit invoices and any necessary supporting documentation, in an original and 4 copies, to the contract auditor at the following address:

(To be filled in at time of award)

unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order. In addition, an information copy shall be submitted to [See Section G for designated COR]. Following verification, the contract auditor will forward the invoice to the designated payment office for payment in the amount determined to be owing, in accordance with the applicable payment (and fee) clause(s) of this contract.

(c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery orders. There shall be a lapse of no more than 30 calendar days between performance and submission of an interim payment invoice.

(d) In addition to the information identified in the Prompt Payment clause herein, each invoice shall contain the following information, as applicable:

- (1) Contract line item number (CLIN)
- (2) Subline item number (SLIN)
- (3) Accounting Classification Reference Number(ACRN)
- (4) Payment terms
- (5) Procuring activity
- (6) Date supplies provided or services performed
- (7) Costs incurred and allowable under the contract
- (8) Vessel (e.g., ship, submarine or other craft) or system for which supply/service is provided

- (e) A DD Form 250, "Material Inspection and Receiving Report",  
 \*\* is required with each invoice submittal.  
 \*\* is required only with the final invoice.  
 \*\* is not required.
- (f) A Certificate of Performance  
 \*\* shall be provided with each invoice submittal.  
 \*\* is not required.
- (g) The Contractor's final invoice shall be identified as such, and shall list all other invoices (if any) previously tendered under this contract.
- (h) Cost of performance shall be segregated, accumulated and invoiced to the appropriate ACRN categories to the extent possible. When such segregation of costs by ACRN is not possible for invoices submitted with CLIN/SLINS with more than one ACRN, an allocation ratio shall be established in the same ratio as the obligations cited in the accounting data so that costs are allocated on a proportional basis.

### **G-7 INCREMENTAL FUNDING**

This contract is incrementally funded pursuant to the Limitation of Funds clause, FAR 52.232-22. Funds are allotted to the contract in the amount of \$ \* and it is estimated that they are sufficient for contract performance through \*.

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

### **G-8 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)**

The purpose of these instructions is to permit the paying office to charge the accounting classification citations in the contract in a manner that reflects the performance of the contract. These instructions do not create any obligation on the part of the Government or the contractor nor do they in any way alter any obligation created by any other provision of the contract. Invoices should be paid from available ACRNs in the following order:

- (a) ACRNs cited on the contractor's invoice.
- (b) On a proportional basis from any ACRNs assigned to funds which will cancel at the end of the current fiscal year.
- (c) The ACRN assigned to the following line of accounting:  
 97X4930.NH4A 000 77777 0 000173 2F 000000 N00173Z45000.
- (d) If funds appropriated in more than one fiscal year are allotted to the contract, the ACRN assigned to the oldest allotment of funds.
- (e) On a proportional basis from all ACRNs assigned to allotments of funds appropriated in a single fiscal year.

## SECTION H SPECIAL CONTRACT REQUIREMENTS

### H-1 TYPE OF CONTRACT

This is a

(To be filled in at time of award)

### H-2 ONR 5252.237-9705 - KEY PERSONNEL (DEC 88)

- (a) The Contractor agrees to assign to the contract tasks those persons whose resumes were submitted with its proposal and who are necessary to fulfill the requirements of the contract as "key personnel". No substitutions may be made except in accordance with this clause.
- (b) The Contractor understands that during the first ninety (90) days of the contract performance period, no personnel substitutions will be permitted unless these substitutions are unavoidable because of the incumbent's sudden illness, death or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information described in paragraph (c) below. After the initial ninety (90) day period the Contractor must submit to the Contracting Officer all proposed substitutions, in writing, at least fifteen (15) days in advance (thirty (30) days if security clearance must be obtained) of any proposed substitution and provide the information required by paragraph (c) below.
- (c) Any request for substitution must include a detailed explanation of the circumstances necessitating the proposed substitution, a resume for the proposed substitute, and any other information requested by the Contracting Officer. Any proposed substitute must have qualifications equal to or superior to the qualifications of the incumbent. The Contracting Officer or his/her authorized representative will evaluate such requests and promptly notify the Contractor of his/her approval or disapproval thereof.
- (d) In the event that any of the identified key personnel cease to perform under the contract and the substitute is disapproved, the contract may be immediately terminated in accordance with the Termination clause of the contract.

The following are identified as key personnel:

(To be filled in at time of award)

### H-3 ONR 5252.216-9706 - LEVEL OF EFFORT (DEC 88)

- (a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in this contract. The total level of effort for performance of this contract shall be 25,250 total hours of direct labor for the base year and 25,250 total hours for each of the option years. The total shall include subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort. A breakdown of labor categories and hours is set forth in paragraph (k) below.
- (b) The level of effort for this contract shall be expended at an average rate of 2104.17 hours per month. It is understood and agreed that the rate of hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total hours of effort prior to the

expiration of the term of the contract.

(c) The Contractor is required to notify the Contracting Officer when any of the following situations occur, or are anticipated to occur: If during any three consecutive months the monthly average is exceeded by 25% or, if at any time it is forecast that during the last three months of the contract less than 50% of the monthly average will be used during any given month; or, when 85% of the total level of effort has been expended.

(d) If, during the term of the contract, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total hours of effort specified would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing, setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fixed fee together with an offer setting forth a proposed level of effort, cost breakdown, and proposed fixed fee for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(e) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total hours of effort specified in paragraph (a) above would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(f) If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the term of this contract, the Contracting Officer shall either (i) reduce the fixed fee of this contract as follows:

$$\text{Fee Reduction} = \text{Fixed Fee} \times \frac{(\text{Required LOE Hours} - \text{Expended LOE Hours})}{\text{Required LOE Hours}}$$

or (ii) subject to the provisions of the clause of this contract entitled "Limitation of Cost," require the Contractor to continue to perform the work until the total number of hours of direct labor specified in paragraph (a) shall have been expended, at no increase in the fixed fee of this contract.

(g) In the event the government fails to fully fund the contract in a timely manner, the term of the contract may be extended accordingly with no change to cost or fee. If the government fails to fully fund the contract, the fee will be adjusted in direct proportion to that effort which was performed.

(h) Notwithstanding any of the provisions in the above paragraphs, the Contractor may furnish hours up to five percent in excess of the total hours specified in paragraph (a) above, provided that the additional effort is furnished within the term hereof, and provided further that no increase in the estimated cost or fixed fee is required, and no adjustment in the fixed fee shall be made provided that the Contractor has delivered at least 95% of the level of effort required in paragraph (a) above.

(i) It is understood that the mix of labor categories provided by the Contractor under the contract, as well as the distribution of effort among those categories, may vary considerably from the initial mix and distribution of effort which was estimated by the government or proposed by the Contractor.

(j) Nothing herein shall be construed to alter or waive any of the rights or obligations of either party pursuant to the Clause entitled "Limitation of Costs" or "Limitation of Funds," either of which clauses as incorporated herein applies to this contract.

(k) The anticipated breakdown by labor category of the total level of effort is as follows:  
For Proposal and Informational Purposes Only: The Offeror may assume that the estimated maximum number of hours is equally distributed to each of the base and option years.

<u>Labor Category</u>	<u>Hours</u>
Program Manager/Senior Scientist	8000
Senior Research Analyst – 1	8000
Senior Research Analyst – 2	8000
Senior Research Analyst – 3	8000
Senior Research Analyst – 4	8000
Senior Research Analyst – 5	8000
Senior Research Analyst – 6	8000
Research Analyst – 1	8000
Research Analyst – 2	8000
Research Analyst – 3	8000
Research Analyst – 4	8000
Research Analyst/Sen. Mechanical Design Engineer	8000
Mechanical and Quality Assurance Engineer	5000

#### **H-4 ONR 5252.235-9714 - REPORT PREPARATION (FEB 97)**

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-1995, "Scientific and Technical Reports: Elements, Organization, and Design." [NOTE: ANSI Z39.18 may be obtained from NISO Press Fulfillment Center, P. O. Box 338, Oxon Hill, MD. 20750-0338. Telephone 1-800-282-6476]

#### **H-5 OPTION TO EXTEND TERM**

This contract shall be renewable at the unilateral option of the Government by the Contracting Officer's notice of renewal to the Contractor within the existing term of the contract.

#### **H-6 ON-SITE USE OF GOVERNMENT PROPERTY**

It is anticipated that Government property will be used by the contractor's personnel in the performance of that portion of the contract performed on-site at the U.S. Naval Research Laboratory (NRL) including any of its field sites. Such use will be on a rent free basis and all such property shall be considered to remain in the possession and control of the NRL for property responsibility and accountability purposes.

#### **H-7 GOVERNMENT-FURNISHED PROPERTY**

The following Government property will be furnished to the contractor on a rent-free basis for use in performing the contract:

(To be filled in at time of award)

**H-8 YEAR 2000 COMPLIANT INFORMATION TECHNOLOGY**

This requirement applies to information technology (IT) that processes date-related information. All such IT delivered under this contract shall be Year 2000 compliant as defined at FAR 39.002.

**H-9 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.

**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.arnet.gov/far>

<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)                              |
| 52.211-15 | - | Defense Priority and Allocation Requirements (SEP 1990)  |
| 52.215-2  | - | Audit And Records-Negotiation (JUNE 1999)  |
| 52.215-8  | - | Order of Precedence - Uniform Contract Format (OCT 1997)   |
| 52.215-14 | - | Integrity of Unit Prices (OCT 1997)  |
| 52.215-15 | - | Pension Adjustments And Asset Reversions (DEC 1998)  |
| 52.215-17 | - | Waiver of Facilities Capital Cost of Money (OCT 1997)<br>( <i>will be included if the successful offeror does not propose facilities capital cost of money</i> ) |
| 52.215-18 | - | Reversion or Adjustment of Plans for Post-retirement Benefits (PRB) Other than Pensions (OCT 1997)   |
| 52.215-19 | - | Notification of Ownership Changes (OCT 1997)   |
| 52.215-21 | - | Requirements for Cost and Pricing Data or Information Other Than Cost or Pricing Data - Modifications (OCT 1997) - Alternate IV (OCT 1997)                       |
| 52.216-7  | - | Allowable Cost And Payment (APR 1998)  |
| 52.216-8  | - | Fixed-Fee (MAR 1997)   |

- 52.219-4 - Notice of Price Evaluation Preference For HUBZone Small Business Concerns (JAN 1999)  Offeror elects to waive the evaluation preference.
- 52.219-6 - Notice Of Total Small-Business Set-Aside (JUL 1996)
- 52.219-8 - Utilization Of Small Business Concerns (JUNE 1999)
- 52.219-14 - Limitations On Subcontracting (DEC 1996)
- 52.219-25 - Small Disadvantaged Business Participation Program-Disadvantaged Status And Reporting (JAN 1999)
- 52.222-1 - Notice To The Government Of Labor Disputes (FEB 1997)
- 52.222-2 - Payment For Overtime Premiums (JUL 1990) -The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed "0"
- 52.222-3 - Convict Labor (AUG 1996)
- 52.222-4 - Contract Work Hours And Safety Standards Act-Overtime Compensation (JUL 1995)
- 52.222-20 - Walsh-Healey Public Contracts Act (DEC 1996)
- 52.222-21 - Prohibition of Segregated Facilities (FEB 1999)
- 52.222-26 - Equal Opportunity (FEB 1999)
- 52.222-35 - Affirmative Action For Disabled Veterans And Veterans Of The Vietnam Era (APR 1998)
- 52.222-36 - Affirmative Action For Workers With Disabilities (JUN 1998)
- 52.222-37 - Employment Reports On Disabled Veterans And Veterans Of The Vietnam Era (APR 1998)
- 52.223-2 - Clean Air And Water (APR 1984)
- 52.223-3 - Hazardous Material Identification And Material Safety Data (JAN 1997)
- 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)
- 52.225-11 - Restrictions On Certain Foreign Purchases (AUG 1998)
- 52.227-1 - Authorization And Consent (JUL 1995)- Alternate I (APR 1984)
- 52.227-2 - Notice And Assistance Regarding Patent And Copyright Infringement (AUG 1996)
- 52.227-11 - Patent Rights - Retention By The Contractor (Short Form) (JUN 1997)  
*(will be included if the successful offeror is a small business or a non-profit organization)*
- 52.227-12 - Patent Rights - Retention By The Contractor (Long Form) (JAN 1997)  
*(will be included if the successful offeror is not a small business or a non-profit organization)*
- 52.228-7 - Insurance - Liability To Third Persons (MAR 1996)
- 52.232-9 - Limitation On Withholding Of Payments (APR 1984)
- 52.232-17 - Interest (JUN 1996)
- 52.232-18 - Availability Of Funds (APR 1984)
- 52.232-20 - Limitation Of Cost (APR 1984) (Applicable when the contract or task order is fully funded)
- 52.232-22 - Limitation Of Funds (APR 1984) (Applicable when the contract or task order is not fully funded)
- 52.232-23 - Assignment Of Claims (JAN 1986) Alternate I (APR 1984)
- 52.232-25 - Prompt Payment (JUN 1997)
- 52.232-33 - Payment By Electronic Funds Transfer-Central Contractor Registration (MAY 1999)
- 52.233-1 - Disputes (DEC 1998)

- 52.233-3 - Protest After Award (AUG 1996) - Alternate I (JUN 1985)
- 52.237-2 - Protection Of Government Buildings, Equipment And Vegetation (APR 1984)
- 52.237-3 - Continuity Of Services (JAN 1991)
- 52.237-10 - Identification of Uncompensated Overtime (OCT 1997)
  
- 52.242-1 - Notice Of Intent To Disallow Costs (APR 1984)
- 52.242-3 - Penalties For Unallowable Costs (OCT 1995)
- 52.242-4 - Certification of Final Indirect Costs (JAN 1997)
- 52.242-13 - Bankruptcy (JUL 1995)
- 52.243-2 - Changes - Cost-Reimbursement (AUG 1987) - Alternate V (APR 1984)
- 52.243-6 - Change Order Accounting (APR 1984)
- 52.243-7 - Notification Of Changes (APR 1984)fill in 30
- 52.244-2 - Subcontracts (AUG 1998) - Alternate I (AUG 1998)
- 52.244-5 - Competition In Subcontracting (DEC 1996)
- 52.244-6 - Subcontracts for Commercial Items and Commercial Components (OCT 1998)
- 52.245-5 - Government Property (Cost-Reimbursement, Time-And-Material, Or Labor-Hour Contracts) (JAN 1986) (DEVIATION)
- 52.245-9 - Use And Charges (APR 1984) (DEVIATION)
- 52.245-18 - Special Test Equipment (FEB 1993)
- 52.245-19 - Government Property Furnished "As-Is" (APR 1984)
- 52.246-23 - Limitation Of Liability (FEB 1997)
- 52.246-25 - Limitation Of Liability - Services (FEB 1997)
- 52.247-1 - Commercial Bill Of Lading Notations (APR 1984)
- 52.247-63 - Preference For U. S. Flag Carriers (JAN 1997)
- 52.249-6 - Termination (Cost-Reimbursement) (SEP 1996)
- 52.249-14 - Excusable Delays (APR 1984)
- 52.251-1 - Government Supply Sources (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)

## **b. DEPARTMENT OF DEFENSE FEDERAL ACQUISITION REGULATION CLAUSES**

### **DFARS CLAUSE TITLE**

- 252.201-7000 - Contracting Officer's Representative (DEC 1991)
- 252.203-7001 - Prohibition On Persons Convicted Of Fraud Or Other Defense Contract Related Felonies (MAR 1999)
- 252.203-7002 - Display Of DoD Hotline Poster (DEC 1991)
- 252.204-7000 - Disclosure Of Information (DEC 1991)
- 252.204-7003 - Control Of Government Personnel Work Product (APR 1992)
- 252.204-7004 - Required Central Contractor Registration (MAR 1998)
- 252.205-7000 - Provision Of Information To Cooperative Agreement Holders (DEC 1991)
- 252.209-7000 - Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate-Range Nuclear Forces (INF) Treaty (NOV 1995)
- 252.209-7004 - Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (MAR 1998)
- 252.223-7001 - Hazard Warning Labels (DEC 1991)

- 252.223-7006 - Prohibition On Storage And Disposal Of Toxic And Hazardous Materials (APR 1993)
- 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 (MAY 1999)
- 252.225-7026 - Reporting Of Contract Performance Outside The United States (MAR 1998)
- 252.225-7031 - Secondary Arab Boycott Of Israel (JUN 1992)
- 252.225-7043 - Antiterrorism/Force Protection Policy For Defense Contractors Outside The United States (JUN 1998) (fill in : Naval Criminal Investigative Service (NCIS), Code 24, telephone, DSN 228-9113 or commercial (202)433-9113)
- 252.227-7000 - Non Estoppel (OCT 1966)
- 252.227-7001 - Release Of Past Infringement (AUG 1984)
- 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)
- 252.227-7016 - Rights In Bids or Proposal Information (JUN 1995)
- 252.227-7019 - Validation Of Asserted Restrictions--Computer Software (JUN 1995)
- 252.227-7025 - Limitations On The Use Or Disclosure Of Government-Furnished Information Marked With Restrictive Legends (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)
- 252.227-7034 - Patents--Subcontracts (APR 1984)
- 252.227-7036 - Declaration Of Technical Data Conformity (JAN 1997)
- 252.227-7037 - Validation Of Restrictive Markings On Technical Data (NOV 1995)
- 252.227-7039 - Patents--Reporting of Subject Inventions (APR 1990)
- 252.231-7000 - Supplemental Cost Principles (DEC 1991)
- 252.235-7010 - Acknowledgment of Support and Disclaimer (MAY 1995)
- 252.235-7011 - Final Scientific Or Technical Report (MAY 1995)
- 252.242-7000 - Post Award Conference (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)  
(will be included if the successful offeror made a negative response to the inquiry at DFARS 252.247-7022)
- 252.251-7000 - Ordering From Government Supply Sources (MAY 1995)

(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).

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

- J-1** Attachment (1) - Statement Of Work: 9 Pages
- J-2** Workforce Qualifications and Experience 5 Pages
- J-3** Exhibit A - DD Form 1423, Contract Data Requirements-2 Pages, Enclosure (1) - Instructions For Distribution- 1 Page, Enclosure (2) – Instructions for Monthly Cost and Performance Reporting Requirements - 1 Page, and Enclosure (3) – Specific Reporting Requirements for CDRL A004 Task Reports, 5 Pages
- J-4** Attachment (4) - ACCOUNTING AND APPROPRIATION DATA  
(\* - Accounting and Appropriation Data will be provided at Contract Award)

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

**K-1 Representations, Certifications, and Other Statements of Offerors or Respondents**

Each Offeror must submit a completed Representations, Certifications, and Other Statements Of Offerors or Respondents with its proposal which is available electronically in full text at <http://heron.nrl.navy.mil/contracts/rep&certs.htm>

**K-2 FILL IN FOR FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (MAY 1999)**

The fill in information is as follows:

The standard industrial classification (SIC) code for this acquisition is 8731.

The small business size standard is 500.

**K-3 COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING**

The Offeror's CAGE Code is {fill-in}\_\_\_\_\_.

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

**FAR CLAUSE    TITLE**

52.204-6	-	Data Universal Numbering System (DUNS) Number (JUNE 1999)
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)
52.215-16	-	Facilities Capital Cost Of Money (OCT 1997)
52.222-24	-	Preaward On-Site Equal Opportunity Compliance Evaluation (FEB 1999)
52.252-5	-	Authorized Deviations in Provisions (APR 1984)

**L-2 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  DX rated order;  DO rated order certified for national use under the Defense Priorities and Allocations system (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

**L-3 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)ALTERNATE IV (OCT 1997)**

(a) Submission of cost or pricing data is not required.

(b) Provide information described below : The Offeror shall provide information as required in Section L.11.C of this solicitation.

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

The Government contemplates award of a Cost Plus Fixed Fee Research and Development Term-type 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 INSTRUCTIONS FOR SUBMISSION AND INFORMATION REQUIRED TO EVALUATE PROPOSALS**

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

(2) 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:

**Solicitation No. N00173-99-R-RS03**  
**Closing Date:**  
**(As specified in Block 9, RFP face page)**  
**Attn: Code 3235:RDS**

(3) Proposal Format and Length - No attempt is made to restrict the proposal format and style. However, the proposal should be written and organized so as to be compatible with the RFP, the Statement of Work, company's organization and accounting structure, and proposed cost estimate. Offerors are encouraged to use recycled paper and maximize the use of double sided copying when preparing responses to solicitations.

**L.11.B VOLUME I - TECHNICAL/MANAGEMENT PROPOSAL****GENERAL PROPOSAL CONTENT:**

Offerors are required to furnish an original and four copies of a detailed TECHNICAL PROPOSAL with sufficient detail to show compliance with the requirements stated in each subparagraph of Section C of this solicitation. Specific cost or pricing details shall be omitted from the Technical Proposal.

The technical proposal shall include any drawings, including schematic drawings, which will enable independent technical evaluation of the proposal.

The technical proposal shall clearly and concisely identify and discuss the Offeror's technical and managerial qualifications and approaches to accomplishing the requirements outlined in Section C.

The technical proposal shall be subdivided into a "Proposal Summary" section, a "Workforce Qualifications and Experience" section, a "Technical Approach" section, a "Corporate Resources and Organizational Capabilities" section, and a "Corporate Past Performance Information" section in that order.

The technical proposal shall also contain responses to each of the individual requirements listed in Section C.3.1 – C.3.7 of Attachment 1, Attachment 2, and Attachment 3. Each response shall furnish the Government with sufficient detail to enable the technical evaluation panel to independently evaluate each response against the respective Government requirement as stated in Section C and Section M.

**L.11.B.1 PROPOSAL SUMMARY**

The proposal summary is an unevaluated requirement. The Offeror shall provide a concise summary, exclusive of cost information, of its proposal. This summary should be complete, stand on its own, and provide executive level reviewers with an understanding of the content of the proposal. The summary should summarize the highlights, plans and qualifications contained in the body of the technical proposal.

**L.11.B.2 WORK FORCE QUALIFICATION AND EXPERIENCE**

The Offeror shall document the experience, education, and other qualifications of all personnel proposed to accomplish the technical requirements stated in Section C of this solicitation. As a minimum, the Offeror shall provide the following information for each proposed individual: (a) name of proposed personnel; (b) proposed labor category, as designated in Attachment 2; (c) proposed Task areas of involvement, as identified in Attachment 1; (d) educational qualifications; (e) technical or managerial qualifications and experience as they relate to the Statement of Work and the requirements in

Attachment 2; (f) length of experience; and (g) previous work history. Key Personnel shall be identified as such.

In addition to the requirements stated above, the Offeror shall (a) describe their plan to retain key personnel throughout the term of any resulting contract, (b) demonstrate their ability to attract additional trained personnel, and (c) describe their strategy for and ability to respond to surges in effort.

#### **L.11.B.3 MANAGERIAL APPROACH**

Pursuant to this requirement, the Offeror shall provide a managerial plan to demonstrate its capability to efficiently, effectively and economically plan, organize, manage and control the work effort required under this solicitation. The Offeror's managerial plan shall address its approach for tracking milestones, costs, subcontractor efforts (if applicable) and deliverables. The Offeror's managerial plan shall also address its proposed internal procedures for assuring timely responses to the Government's research needs on any resulting contract.

#### **L.11.B.4 CORPORATE RESOURCES AND ORGANIZATIONAL CAPABILITIES**

The Offeror shall describe and document those resources which the firm will make available to this project, including, but not limited to, (a) financial resources, (b) research, development and production facilities and equipment, and (c) any other technical resources offered to meet the Government's requirements as stated in Section C of this solicitation.

The Offeror shall document the firm's experience on similar or related projects through narrative descriptions of these experiences. Prior and current program experience should be identified in these narratives by citing contract numbers, contracting agencies or firms, the COR's name and telephone number, the applicable period of performance, and a summary of the nature of the work. The narratives should show the clear relationship of previous work to the requirements of this project.

The Offeror shall demonstrate its capacity to routinely and rapidly respond to the design, engineering, fabrication and installation requirements of a research laboratory through specific examples drawn from the previous five years of operations. The Offeror shall also demonstrate its capability to manage and coordinate the design, fabrication, modification and configuration of airborne installations for testing of EO/IR sensors and systems.

#### **L.11.B.5 CORPORATE PAST PERFORMANCE INFORMATION**

(i) Offerors shall submit the following information as part of their proposal. (Offerors are encouraged to submit the information prior to other parts of the proposal to assist the Government in reducing the length of the evaluation period.) List the last five contracts or subcontracts completed during the past three years for supplies or services similar in nature to this requirement. Include in the five any current contract or subcontracts for similar supplies/services that were awarded at least one year prior to the date of this solicitation. Offerors that have no similar previous or current contracts should provide the requested information for proposed subcontractors that will perform major or critical aspects of the requirement of for the proposed project manager or key personnel responsible for major or critical

aspects of the requirement.

1. Name of contracting organization
2. Contract number
3. Contract type
4. Total Contract Value
5. Description of the contract work
6. Contracting Officer and telephone number
7. Contracting officer's representative, program manager, or similar Official and telephone number

(ii) Offerors shall contact the contracting organizations identified pursuant to paragraph (a) as soon as possible and request them to send past performance information on the identified contracts to the address in Block 7 of the face page of this solicitation. The past performance report, which is available at <http://heron.nrl.navy.mil/contracts/home.htm> is to be provided to the contracting organization for this purpose. If the contracting organization has already collected past performance information on the contract pursuant to FAR Subpart 42.15, the format used to collect the information may be used instead of the past performance report.

(iii) Offerors may include in their proposals specific information relating to problems encountered in performing the identified contracts and any corrective actions by the offeror. Offerors should not provide general information on their performance on the identified contracts as this will be obtained from the contracting organizations.

## **L.11.C VOLUME II - BUSINESS PROPOSAL**

REQUIRED COPIES: 1 ORIGINAL AND 4 COPIES

The Offeror shall submit a Cost/Pricing Proposal, which shall include such explanatory data as is necessary to establish that proposed costs are reasonable, allocable, appropriate and allowable pursuant to both Part 31 of the Federal Acquisition Regulation (FAR) and Part 231 of the Defense Federal Acquisition Regulation Supplement (DFARS). More specifically, the Cost/Pricing proposals shall provide the following information:

- (a) (i) Labor to include categories of labor, individuals proposed within each category; hours proposed for each individual, and hourly rate for each individual;
- (ii) Indirect or Overhead Rate(s);
- (iii) Any Direct Materials proposed;
- (iv) Any Other Direct Costs proposed;
- (v) General and Administrative Rate(s);
- (vi) Facilities Capital Cost of Money Rate(s);
- (vii) Any other applicable rates;
- (viii) Other supporting costs;
- (ix) Fee

(b) Any information reasonably required to explain the Offeror's estimating process, including mathematical algorithms and judgmental factors used in formulating the estimate; and any contingency assumptions employed in arriving at the proposed price

(c) Consultants/Subcontractors: Offerors shall describe subcontracting arrangements proposed for completing the work required herein. Sub-Contractors shall be identified as well as the portion of the work to be subcontracted. Documents establishing a subcontracting relationship shall be submitted with the cost proposal. Offerors may arrange for proposed subcontractors to submit supporting cost data directly to the Government. Any such submission shall not be deemed to establish privity of contract between the Government and the proposed sub-contractor. With respect to Independent Contractors or Consultants, the Offeror shall document direct labor rates proposed by providing the Government with copies of either letters of intent or Consultant or Independent Contractor Agreements executed between the Offeror and the Independent Contractor. Offerors who intend to include subcontracted effort as part of their proposal are responsible for ensuring that complete information as described above is provided from each subcontractor as part of their response to this solicitation.

(d) Material and Travel: FOR PROPOSAL PURPOSES ONLY, Offerors will use the following estimates (with applicable indirect costs added to the estimate) for required material and travel costs. If subcontractors propose material or travel costs, these must also be burdened and that burden added to the estimates.

(i) The "Material" estimate of \$75,000.00 each for Years 1 and 2, and \$25,000.00 each for Years 3 and 4 includes those directly associated items which are expected to be incorporated into end products or expended during performance and minor direct equipment expense.

(ii) The "Travel" estimate of \$150,000.00 for each of the four years included in the period of performance includes travel and subsistence for work at alternative sites, and for allowable local travel per the Joint Travel Regulations.

## **L-12 MULTIPLE AWARDS**

The Contracting Officer may make multiple awards resulting from this solicitation.

## **SECTION M EVALUATION FACTORS FOR AWARD**

### **M-1 EVALUATION**

Award will be made to that responsible offeror whose proposal is determined to be the best value to the Government, proposed cost and other factors considered. The Government reserves the right to make award to other than the low offeror. Although technical considerations are more important than cost, the closer the technical scores of the various proposals are to one another, the more important cost considerations become.

**M-2 EVALUATION FACTORS FOR AWARD**

Proposals received in response to this solicitation will be evaluated in accordance with the criteria stated in Sections L.11.B(2), L.11.B(3), L.11.B(4), and L.11.B(5) which together comprise the Technical Category; and Section L.11.(C), which comprises the Cost/Pricing category.

**M-2-1 – TECHNICAL CATEGORY**

The technical evaluation will consider the Offeror's overall approach to, understanding of, and capability to adequately perform and provide the requirements listed in the Statement of Work, as reflected in the Offeror's responses to the evaluation criteria listed in Sections L.11.B.2, L.11.B.3, L.11.B.4, and L.11.B.5. Technical scores will be based on evaluative determinations of whether the Offeror's proposal meets, does not meet, or exceeds the Government's minimum requirements. Pursuant to FAR 15.306(c), proposals which are found to contain unrealistic technical or schedule terms, which fail to comply with the requirements stated in this RFP, or which are found to be unrealistically high or low in cost/price, may be significantly downgraded or removed from further consideration. Areas within the Offeror's technical proposal which are found to offer unique or innovative technical solutions or effort beyond the Government's anticipations as stated in Attachment 1 may receive maximum technical scores.

Evaluated Components within the Technical area include "Workforce Qualifications and Experience", "Managerial Approach", "Corporate Resources and Organizational Capabilities" and "Corporate Past Performance Information". Within the Technical category, the component "Workforce Qualifications and Experience" is weighted significantly higher than the component "Corporate Resources and Organizational Capabilities", which is rated higher than the component "Managerial Approach", which is weighted higher than the component "Corporate Past Performance Information".

Past Performance – Past performance will be evaluated on the basis of quality of work performed, timeliness of performance, cost control, and business relations. The evaluation will be based on the information provided pursuant to Contract Section L.11.B.(4) and other sources, if available. Offerors that have no relevant performance history or for which past performance information is not available will not be evaluated favorably or unfavorably on past performance. The Government may begin proposal evaluation prior to receipt of past performance information. If, after completion of proposal evaluation except evaluation of past performance, the contracting officer determines that evaluation of past performance will not affect the outcome of competitive selection, the contracting officer may waive its evaluation in accordance with FAR 15.304(c)(3)(iii).

**M-2-2 COST TO THE GOVERNMENT**

Proposed estimated cost to the Government. The Government may adjust the proposed cost for purposes of evaluation based upon the findings of a cost realism analysis. Cost Realism means that the costs in an offeror's proposal represent the most-probable cost; are realistic for the work to be performed; reflect a clear understanding of the requirements; and are consistent with the various elements of the offeror's technical proposal. The cost realism evaluation includes (a) an analysis of the adequacy of the hours, labor mix, and other direct costs to perform the work as proposed in the technical

proposal as well as the proposed labor and indirect rates; (b) an analysis of costs proposed for travel, materials, consultants and subcontractors, facility capital cost of money, and fee; and (c) an evaluation of the likelihood that the risks inherent in the offeror's technical approach will result in higher actual costs than anticipated.

**M-3 FAR 52.217-5 - EVALUATION OF OPTIONS (JUL 1990)**

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interests, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

**ATTACHMENT 1**  
**SECTION C:**  
**STATEMENT OF WORK :**  
**ADVANCED TECHNOLOGY EO/IR PROGRAM**  
**FOR THE NEXT MILLENIUM**  
**(ADTEC-2000)**

**C.1. BACKGROUND**

The Optical Sciences Division of the Naval Research Laboratory carries out a variety of research and development activities in support of Naval aviation. This analytic and experimental research includes: (a) issues affecting Naval systems with an emphasis on aircraft and airborne systems, such as Reconnaissance Systems and associated sensor system; (b) identification of requirements for developing solutions to threat systems; (c) implementation of new technologies to provide solutions to advanced threat systems; (d) analysis and evaluation of promising technology, including development of one-of-a-kind measurement and evaluation processes; and (e) technical management and engineering support to aid the transition of new technologies into Engineering Development programs.

**C.2: SCOPE**

The purpose of the contract is to acquire the personnel, equipment and facilities to perform a comprehensive, integrated program of research, analysis, and technical engineering evaluation of new airborne systems and avionics for Navy and Marine Corps aircraft into the next millenium. The required engineering efforts and areas of technical investigation will be broad, but will emphasize electro-optic and infrared (EO/IR) sensor and system development, which will include, but may not be limited to, reconnaissance systems and equipment and other platform survivability systems and equipment. The initial thrust of this action will be to identify what reconnaissance capabilities can be achieved with the addition of low-cost sensor suites and the use of other existing or planned sensors whose primary function is not reconnaissance. Initial candidate aircraft will include, but may not be limited to, the P-3 and S-3 aircraft.

Technical work under this action will require in-depth expertise in Radio Frequency systems due to evolving threat systems, which use dual mode seekers and multi-mode trackers. The overall objectives of this program are (a) the identification and development of state-of-the-art technologies which will provide solutions to current or projected Fleet survivability problems; and (b) the implementation, evaluation, and transition of these technologies into development or unique, one-of-a-kind, implementations.

The Government anticipates that the work to be performed under this contract will be performed both at the Contractor's site and at the Naval Research Laboratory.

Deliverables required under this contract shall include monthly cost and progress reports; a final technical report; both computer and non-computer based algorithms, source code, executable code and documentation; and task specific technical reports in accordance with DD Form 1423.

### C.3 STATEMENT OF WORK

#### C.3.1 TASK 1 – RESEARCH, ANALYSIS, AND EVALUATION

The Contractor shall analyze (a) current capabilities, (b) the shortfalls of existing systems, (c) the documentation of requirements, and (d) analysis/evaluation of alternatives in pursuit of the NRL Advanced Technology-2000 program's mission and goals. Efforts associated with this task shall include the following:

##### C.3.1.1 Sub-Task 1.1

The Contractor shall review and analyze mission profiles and Intelligence Agency threat documents relevant to Naval aircraft and assess the adequacy of existing onboard avionics systems to meet currently-deployed and projected threats. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423 and Enclosure (3) thereto.

##### C.3.1.2 Sub-Task 1.2

The Contractor shall identify and delineate those threat systems containing deficient threat solution requirements documents. The Contractor shall then develop and present to the COR (a) a priority-based ordering of the deficient threat solution requirements documents, and (b) a detailed plan and rationale for addressing these deficiencies. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423 and Enclosure (3) thereto.

##### C.3.1.3 Sub-Task 1.3

The Contractor shall identify specific combinations of missions, avionics, and threats where deficiencies exist. The Contractor shall then develop recommendations for technology insertion to incorporate new or improved capabilities to remedy these deficiencies. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423 and Enclosure (3) thereto.

##### C.3.1.4 Sub-Task 1.4

The Contractor shall conduct a review of existing capabilities with the Navy, other Services, and Industry to identify cost-effective alternate solutions to mission and avionics deficiencies. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423 and Enclosure (3) thereto.

##### C.3.1.5 Sub-Task 1.5

The Contractor shall assess the impact of introducing new or modified avionics systems into current operational systems or into projected systems. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423 and Enclosure (3) thereto.

C.3.1.6 Sub-Task 1.6

The Contractor shall analyze EO/IR advanced technology research and development programs by comparing alternatives for implementing solutions to deficiencies and contrasting them in terms of cost, schedule, and performance. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423 and Enclosure (3) thereto.

C.3.1.7 Sub-Task 1.7

The Contractor shall provide such documentation as is necessary to support decisions for transitioning those new technologies capable of addressing the deficiencies noted above into the next stage of development. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.2 TASK 2 – PROTOTYPE DESIGN, DEVELOPMENT, AND INSTALLATION

To facilitate the development of new sensor systems and to provide a means to evaluate new and/or refurbished systems, the Contractor shall design and construct prototype EO/IR reconnaissance, or other avionic system installations, for both NRL's research-configured P-3 aircraft and for various pod systems suitable for flight on a variety of tactical Naval aircraft. Effort associated with this task shall include the following:

C.3.2.1 Sub-Task 2.1

The Contractor shall perform efforts directed toward (a) modification, (b) refurbishment, (c) payload design, (d) payload alteration, (e) aircraft installation and de-installation, (f) maintenance, and (g) fabrication of unique EO/IR sensors and systems. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.2.2 Sub-Task 2.2

As directed, the Contractor shall design and mount environmental sensors, threat warning sensors, pointer tracker systems, reconnaissance systems, cameras, multi-spectral sensors, and various other instrumentation packages to pods and R&D platforms on manned and unmanned aircraft. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.2.3 Sub-Task 2.3

The Contractor shall initiate and approve necessary flight certifications for aircraft payloads, pod designs, and pod modifications, which may include engaging consulting services for engineering analysis of new designs and modifications to expedite the certification process. Consultants shall not be engaged without written approval from the Contracting Officer's Representative (COR) in accordance with Section G-3 of this contract. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.2.4 Sub-Task 2.4

The Contractor shall develop and control engineering drawings and analyses for fabrication of new designs, modifications, and refurbishments of applicable EO/IR sensors and systems. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.2.5 Sub-Task 2.5

The Contractor shall provide fabrication facilities for construction of the required hardware. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.3 TASK 3 – MEASUREMENT AND EVALUATION

Under this Task, the Contractor shall develop and implement a test program to evaluate the performance capabilities of new or modified sensor systems developed under this contract. Efforts associated with this task shall include the following:

C.3.3.1 Sub-Task 3.1

The Contractor shall develop measurements and evaluation plans and schedules, to (a) facilitate an efficient, effective, and logical progression, and (b) ensure quality assurance, for new or modified sensors and systems as they move from laboratory and field-testing efforts through proof-of-concept flight tests. The required measurements, plans, and schedules shall be submitted to the COR for review and approval prior to implementation. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.3.2 Sub-Task 3.2

The Contractor shall develop and provide an assessment methodology for determining the effects of environmental conditions on advanced EO/IR system performance. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.3.3 Sub-Task 3.3

The Contractor shall assess measurement and evaluation capabilities, and provide the COR with recommendations concerning cost effective utilization of measurement and evaluation facilities in pursuit of this program. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.3.4 Sub-Task 3.4

The Contractor shall develop the measurement and evaluation resource requirements necessary to (a) perform proof-of-concept flight-testing, and (b) prepare preliminary and final reports, on applicable EO/IR sensors and systems. Deliverables under this subtask shall include a task report in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.3.5 Sub-Task 3.5

The Contractor shall perform the efforts necessary to plan, coordinate, schedule, and execute airborne and ground-based technical assessments of applicable EO/IR sensors and systems. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.3.6 Sub-Task 3.6

The Contractor shall perform the efforts necessary to conduct flight planning, ground station site coordination, and resource planning necessary to support system demonstrations and analysis. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.3.7 Sub-Task 3.7

Pursuant to the requirements of this contract, the Contractor shall interface with personnel from NRL, the designated representatives of other Navy Units or other Government agencies, and the designated representatives of other Contractors, as directed by the COR. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.3.8 Sub-Task 3.8

The Contractor shall review data acquired from laboratory and field tests and conduct an independent analysis of the results. The Contractor shall estimate utilize existing simulations and models to extrapolate and interpolate the test results. The anticipated results of this effort shall be estimations of the probable performance of the applicable systems or technologies under the expected range of operational conditions. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

#### C.3.4 TASK 4 – EVALUATION OF TECHNICAL ALTERNATIVES

The continuing development of radar and electronic warfare sensors and systems provides a set of systems on-board Naval aircraft whose collected data may compliment the data collected from EO/IR sensors. Pursuant to this information, the Contractor shall examine possible methods for effective utilization of these sensor systems in coordination with EO/IR systems. Efforts associated with this task shall include the following:

##### C.3.4.1 Sub-Task 4.1

The Contractor shall acquire descriptions of the deployed systems so that collected data sets may be fully characterized. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

##### C.3.4.2 Sub-Task 4.2

The Contractor shall perform an analysis on those data sets acquired under sub-task 4.1 to assess the availability of information which may be complimentary to the information acquired by EO/IR systems. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

##### C.3.4.3 Sub-Task 4.3

The Contractor shall assess what tradeoffs can be made in the design of new EO/IR systems to reduce cost, improve usefulness, or otherwise take advantage of the presence of other sensor systems. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

#### C.3.5 TASK 5 – TECHNICAL ASSESSMENT OF R&D PROGRAMS

Pursuant to this task, the Contractor shall review the documentation required for transition of technology programs into the next stage of development. The efforts associated with this task shall include the following:

C.3.5.1 Sub-Task 5.1

The Contractor shall evaluate both the interoperability and the application of technology between airborne and shipboard EO/IR advanced systems. The required effort shall include an evaluation of the interoperability of complex EO/IR avionics systems with current or near term RF systems. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.5.2 Sub-Task 5.2

The Contractor shall analyze both the potential cost savings and the improved database resulting from the use of complimentary sensor systems. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.5.3 Sub-Task 5.3

The Contractor shall conduct technical and engineering evaluation studies to assess the operational performance of advanced technology RF programs with conceptual EO/IR R&D programs. This subtask is in support of countermeasures development for the emerging dual-mode seeker threat which requires both an IR and an RF solution simultaneously. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.5.4 Sub-Task 5.4

The Contractor shall assess other potential Government agency users of the EO/IR technology developed under this program. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.5.5 Sub-Task 3.5

The Contractor shall conduct technical analyses of the application of baseline IR decoy designs and their impact on the utilization of EO/IR sensors. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.6 TASK 6 – PERFORMANCE AND SYSTEM SPECIFICATIONS

Based on the results of previously tasks described herein, which have either been completed or are in progress, the Contractor shall develop a plan of implementing the optimal system in response to operational requirements. Efforts associated with this task shall include the following:

C.3.6.1 Sub-Task 6.1

The Contractor shall develop a program plan, which shall, as a minimum, address (a) technical planning and coordination, (b) engineering investigation and program scheduling, (c) tracking and analysis efforts for on-board sensor systems suitable for entry into Advanced Development, (d) Test and Evaluation efforts, and (e) engineering and manufacturing development. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.6.2 Sub-Task 6.2

The Contractor shall use measurement results, modeling, analysis, and integration concepts to provide scientific, engineering, and technical reports pursuant to the development of reconnaissance sensor systems for Navy Tactical aircraft, with emphasis on the P-3 and S-3. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.6.3 Sub-Task 6.3

The Contractor shall develop design concepts for sensor systems with maximal commonality suitable for multiple Navy tactical aircraft. The required design concepts shall, as a minimum, (a) identify common design requirements and constraints; and (b) identify critical requirement differences and recommend component, assembly, sub-system, and interface designs to meet the performance requirements at minimal design costs, weight, and power requirements. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.6.4 Sub-Task 6.4

The Contractor shall develop the test programs and measurement plans necessary to implement the technical demonstrations needed to transition the systems concepts to the next stage of systems development. Deliverables under this subtask shall include task reports in accordance with CDRL A004, DD Form 1423, and Enclosure (3) thereto.

C.3.7 TASK 7 – RISK REDUCTION ENGINEERING

Based on the measurements, technical analysis, and threat capabilities previously addressed in this document, the Contractor shall develop a set of sensor requirements for a lower-risk sensor suite. Efforts associated with this task shall include the following:

C.3.7.1 Sub-Task 7.1

The Contractor shall design and implement sensor test systems to determine developmental sensor performance capabilities, sensor degradation with use, and overall reliability. The Contractor shall (a) recommend procedures for integration, calibration and maintenance of test instrumentation, (b) develop test plans and associated documentation, (c) perform tests, and (d) provide written test reports.

C.3.7.2 Sub-Task 7.2

The Contractor shall assess and recommend a modeling and simulation capability suitable for reconnaissance systems. The Contractor shall develop plans and recommendations on how such a modeling and simulation capability could best be utilized to reduce design risks and to optimize the number and types of field tests required.

**ATTACHMENT 2:**  
**WORKFORCE QUALIFICATIONS AND EXPERIENCE**

It is anticipated that the following labor categories will be required under any resulting contract: (a) Program Manager/Senior Scientist, (b) Senior Research Analysts, (c) Research Analysts, and (d) Engineers. The following paragraphs address educational and experiential requirements for each labor designation.

(\*\*) – Denotes Anticipated Key Personnel

**(1) PROGRAM MANAGER/SENIOR SCIENTIST (\*\*)**

**Educational Requirements** – The Program Manager/Senior Scientist shall, as a minimum, possess a Master of Science degree in Technical/Engineering Management. The Government prefers a candidate who possesses a Ph.D. in the aforementioned area.

**Experience** – The Program Manager/Senior Scientist shall possess (i) a minimum of 15 years of demonstrated experience in the field of technical/engineering management; (ii) a minimum of 10 years of demonstrated experience in engineering or technical support for development programs in Electronic Warfare or Avionics Systems, with emphasis on EO/IR and Radio Frequency (RF) technologies; (iii) a minimum of 10 years of demonstrated experience in systems research, development, testing and acquisition requiring familiarity with the programmatic requirements of DoD 5000 series directives, strategic planning, and advanced management; (iv) a minimum of 5 years of demonstrated direct experience as well as management experience in performing hardware development and/or data analysis in Electronic Warfare or Avionics Systems; (v) demonstrated experience in developing and writing test planning documents such as Test and Evaluation Master Plans (TEMP); and (vi) demonstrated experience in technical reporting of development efforts.

**(2) SENIOR RESEARCH ANALYST – 1**

**Educational Requirements** – The Senior Research Scientist-1 shall, as a minimum, possess a Master of Science degree in an area related to the technical requirements stated in the Statement of Work.

**Experience** – The Senior Research Scientist-1 shall possess (i) a minimum of 10 years demonstrated experience in the use of Electronic Combat or Avionics systems aboard Navy Electronic Warfare aircraft; (ii) at least 5 years of technical, engineering and management experience in Navy requirements development; (iii) at least 3 years of direct experience in Electronic Warfare or Avionics programs and systems engineering for Naval aircraft-related programs, including experience in engineering support for airborne Research and Development projects in RF and EO/IR technologies; and (iv) demonstrated experience in developing unique test programs. Knowledge of foreign development and testing of directed energy systems is desirable.

**(3) SENIOR RESEARCH ANALYST – 2**

Educational Requirements – The Senior Research Scientist-2 shall, as a minimum, possess a Master of Science degree in Engineering related to Electronic Combat or Avionics.

Experience – The Senior Research Scientist-2 shall possess (i) a minimum of 5 years of demonstrated experience in the use of Electronic Combat or Avionics systems aboard larger Navy aircraft such as the P-3, E-2C, or S-3; (ii) a minimum of 5 years technical, engineering, and management experience for DoD acquisition programs, including experience in the milestone review process; (iii) at least 10 years of direct experience in Electronic Warfare or Avionics programs and systems engineering for Naval aircraft-related programs, including experience in engineering support for airborne Research and Development projects in RF and EO/IR technologies; (iv) documented experience in providing technical and engineering evaluations for both directed energy EO/IR systems and advanced development reconnaissance systems.

**(4) SENIOR RESEARCH ANALYST – 3**

Educational Requirements – The Senior Research Scientist-3 shall, as a minimum, possess a Bachelor of Science degree in Physics or Electrical Engineering.

Experience – The Senior Research Scientist-3 shall possess (i) demonstrated specific experience in the integration of electronic combat or avionics systems into aircraft; (ii) at least 10 years of experience in managing and directing the development of electronic combat or avionics programs for naval aircraft; (iii) a minimum of 10 years of experience in the testing of EW systems for aircraft; (iv) a minimum of 5 years of experience in establishing and coordinating programs for electronic combat or avionics; (v) demonstrated expertise in EO/IR advanced systems research, development, and testing; and (vi) demonstrated experience with an EW simulation facility.

**(5) SENIOR RESEARCH ANALYST – 4**

Educational Requirements – The Senior Research Analyst-4 shall, as a minimum, possess a Masters of Science degree in a field related to the technical requirements provided in the Statement of Work.

Experience – The Senior Research Analyst-4 shall possess (i) demonstrated specific experience in the interoperability and integration of electronic combat or avionics systems in higher performance aircraft; (ii) at least 5 years of experience in flying tactical aircraft and in the integration of aircraft avionics systems into fleet use; (iii) documented experience in development of Electronic Combat or Avionics systems for integration into new aircraft platforms such as the V-22, F/A 18 E/F, or other aircraft; (iv) at least 5 years of documented experience in developing test plans for proof-of-concept test and measurement activities; and (v) demonstrated in-depth knowledge of both EO/IR and RF systems.

**(6) SENIOR RESEARCH ANALYST – 5**

(a) Educational Requirements – The Senior Research Analyst-5 shall, as a minimum, possess a Bachelor of Science degree in a field related to the technical requirements stated in the Statement of Work.

(b) Experience – The Senior Research Analyst-5 shall possess (i) at least 5 years experience as a Marine aviator(pilot); (ii) at least 5 years flight experience in fixed wing or rotary wing aircraft; (iii) at least 5 years of Resource Management Experience directed toward minimization of tests costs; (iv) at least 5 years experience in the integration and application of EO/IR systems into special use aircraft; (v) at least 3 years experience in directing Operational Test and Evaluation of Marine aviation programs; (vi) at least 3 years experience in providing research, engineering, management, and test support to experimental Marine aviation programs; (vii) documented knowledge of testing and evaluation procedures for Marine Corps helicopter and tiltrotor weapons systems; and (viii) documented experience in planning and coordinating operational tests and evaluations for the V-22, CH-60, and H-1 upgrade programs.

**(7) SENIOR RESEARCH ANALYST – 6**

(a) Educational Requirements – The Senior Research Analyst-6 shall, as a minimum, possess a Masters of Science in Mechanical Engineering.

(b) Experience – The Senior Research Analyst-6 shall possess (i)at least 10 years of demonstrated experience in structural analysis; (ii) at least 5 years of demonstrated experience in finite element analysis modeling of aircraft systems, including both internal and pod-mounted installations for P-3, S-3, F-14, and other tactical Naval aircraft; and (iii) at least 5 years of demonstrated experience in the Navy flight certification process.

**(8) RESEARCH ANALYST – 1**

Educational Requirement – The Research Analyst-1 shall, as a minimum, possess a Bachelor's degree in a field related to the technical requirements stated in the Statement of Work.

Experience – The Research Analyst-1 shall possess (i) at least 10 years of demonstrated experience in performing Navy program management efforts for airborne Electronic Combat or avionics programs; (ii) at least 5 years of demonstrated experience in the development of transition data documentation, including Security Classification guides, Point Papers, and POA&Ms; and (ii) at least 5 years experience in Electronic Combat system acquisition schedules and documentation.

**(9) RESEARCH ANALYST – 2**

Educational Requirements – The Research Analyst-2 shall, as a minimum, possess a Bachelors degree in Physical Science or Engineering. A Masters degree in Computer Science or Physical Science would be desirable.

Experience – The Research Analyst-2 shall possess (i) at least 10 years of demonstrated experience in Electronic Combat or Avionics systems; (ii) at least 5 years demonstrated of experience as a pilot on Naval tactical aircraft using Electronic Combat or Avionics systems; (iii) at least 5 years of demonstrated experience in developing or procuring aircraft systems, including design, development and testing efforts; and (iv) at least 5 years of demonstrated program management experience in decoy programs.

**(10) RESEARCH ANALYST – 3**

Educational Requirements – The Research Analyst-3 shall, as a minimum, possess a Bachelors of Science degree in Electrical Engineering.

Experience – The Research Analyst-3 shall possess (i) at least 10 years of demonstrated experience in development of (a) hardware system specifications for Electronic Warfare (EW) Systems (including electronic support measure receivers), (b) Airborne Electric Countermeasures, with emphasis on expendable countermeasures (decoys), (c) EW applications, including hardware specification requirements for RF or EO/IR optical conversion, (d) transmission of RF or EO/IR information over an optical medium, and (e) optical to RF or EO/IR conversion at the output of the optical link; and (ii) 5 years of demonstrated experience in development of high-level system specifications for both active and passive Infrared (IR) electronic warfare systems.

**(11) RESEARCH ANALYST – 4**

Educational Requirements – The Research Analyst-4 shall, as a minimum, possess a Masters degree in a field related to the technical requirements stated in the Statement of Work.

Experience – The Research Analyst-4 shall possess (i) at least 5 years of demonstrated experience as a Marine aviator (pilot); (ii) at least 4 years of demonstrated experience providing engineering, management, and test support to Marine aviation programs; (iii) at least 3 years of demonstrated experience in Operational Test and Evaluation of Marine aviation programs; and (iv) at least 2 years of demonstrated experience in both the coordination of unique test and evaluation programs and the analysis of test data.

**(12) RESEARCH ANALYST/SENIOR MECHANICAL DESIGN ENGINEER**

Educational Requirements – The Research Analyst/Senior Mechanical Design Engineer shall, as a minimum, possess a Masters of Science degree in Mechanical Engineering. These educational requirements may be waived if the experiential requirements listed below are met.

Experience – The Research Analyst/Senior Mechanical Design Engineer shall possess (i) at least 10 years of demonstrated experience in aviation design engineering with at least 5 years of demonstrated experience with system installations/modifications into P-3 aircraft or into pods suitable for flight on P-3 aircraft or other tactical Naval aircraft.

**(13) MECAHNICAL AND QUALITY ASSURANCE ENGINEER**

Educational Requirements – The Mechanical and Quality Assurance Engineer shall, as a minimum, possess a Bachelor of Science degree in Systems Engineering. These educational requirements may be waived if the experiential requirements listed below are met.

Experience – The Mechanical and Quality Assurance Engineer shall possess (i) at least 5 years of demonstrated experience in both the coordination and development of unique Research and Development systems and the installation of these systems into P-3 aircraft or into pods suitable for flight on P-3 aircraft or other tactical Naval aircraft; and (ii) at least 5 years of demonstrated experience in the area of Quality Assurance of both installed aircraft systems and unique, one-of-a-kind, aircraft installations. Prior flight experience on P-3 aircraft is desireable.

# CONTRACT DATA REQUIREMENTS LIST

(2 Data Items)

Form Approved  
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 220 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 Service, 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 Printing Contracting Office for the Contract/PRI No. Stated in Block H.

<b>A. CONTRACT LINE ITEM NO.</b> 0002, 0004, 0006, 0008		<b>B. EXHIBIT</b> A		<b>C. CATEGORY:</b> TDP _____ TM- _____ OTHER _____					
<b>D. SYSTEM / ITEM</b>		<b>E. CONTRACT / PR NO.</b> N00173-99-R-RS03		<b>F. CONTRACTOR</b> (TBD at Time of Award)					
<b>1. DATA ITEM NO.</b> A001	<b>2. TITLE OF DATA ITEM</b> Monthly Cost and Performance Reports			<b>3. SUBTITLE</b>					
<b>4. AUTHORITY (Data Acquisition Document No.)</b>		<b>5. CONTRACT REFERENCE</b> Sections B, C, & H		<b>6. REQUIRING OFFICE</b> NRL CODE (TBD)					
<b>7. DD 250 REQ</b> LT	<b>8. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> MONTHLY	<b>12. DATE OF FIRST SUBMISSION</b> See Blk. 16	<b>14. DISTRIBUTION</b>					
<b>9. APP CODE</b>		<b>11. AS OF DATE</b> See Blk. 16	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> See Blk. 16	<b>15. ADDRESSEE</b>					
<b>16. REMARKS</b> Written Reports, in accordance with Enclosure (2) - Reporting Requirements Instructions, shall be made monthly.  Block 12 - 15 days after the end of the first month after contract execution. Block 13 - 15 days after the end of each subsequent month.  For written technical reports and for letter reports containing scientific or technical information, the distribution in Enclosure (1) applies.				<b>15. COPIES</b>					
				<b>15. ADDRESS</b>		<b>15. COPIES</b>			
				NRL CODE (TBD)		Draft	Final		
				ACO (Trx. Ltr. Only)				1	
				(See Enclosure 1)					
<b>16. TOTAL</b> →				2					
<b>1. DATA ITEM NO.</b> A002	<b>2. TITLE OF DATA ITEM</b> Contract Final Report			<b>3. SUBTITLE</b>					
<b>4. AUTHORITY (Data Acquisition Document No.)</b>		<b>5. CONTRACT REFERENCE</b> Sections B, C, & H		<b>6. REQUIRING OFFICE</b> NRL CODE (TBD)					
<b>7. DD 250 REQ</b> DD**	<b>8. DIST STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> One/R	<b>12. DATE OF FIRST SUBMISSION</b>	<b>14. DISTRIBUTION</b>					
<b>9. APP CODE</b>		<b>11. AS OF DATE</b> See BLK. 16	<b>13. DATE OF SUBSEQUENT SUBMISSION</b>	<b>15. ADDRESSEE</b>					
<b>16. REMARKS</b> Block 11: Not Later than 60 days after contract completion.  A Contract Final Report is defined as a scientific or technical report which summarizes all work accomplished under the Contract.  Reprints of published articles may be accepted as technical reports with the concurrence of the COR.  ** DD 250 required only for acceptance by the COR designated in Section G.				<b>15. COPIES</b>					
				<b>15. ADDRESS</b>		<b>15. COPIES</b>			
				NRL CODE (TBD)		Draft	Final		
				ACO (Trx. Ltr. Only)				1	
				(See Enclosure 1)					
<b>16. TOTAL</b> →				2					
<b>G. PREPARED BY</b> NRL-SSC Code 3235:RDS		<b>H. DATE</b> 02 AUG 1999	<b>I. APPROVED BY</b>		<b>J. DATE</b>				

<b>17. PRICE GROUP</b>
<b>18. ESTIMATED TOTAL PRICE</b>

<b>17. PRICE GROUP</b>
<b>18. ESTIMATED TOTAL PRICE</b>

# CONTRACT DATA REQUIREMENTS LIST

(2 Data Items)

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 220 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 the 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 Printing Office, Washington, DC 20540.

<b>A. CONTRACT LINE ITEM NO.</b> 0002, 0004, 0006, 0008		<b>B. EXHIBIT</b> A		<b>C. CATEGORY:</b> TDP _____ TM _____ OTHER _____	
<b>D. SYSTEM / ITEM</b>		<b>E. CONTRACT / PR NO.</b> N00173-99-R-RS03		<b>F. CONTRACTOR</b> (To Be Determinated at Time of Award)	
<b>1. DATA ITEM NO.</b> A003	<b>2. TITLE OF DATA ITEM</b> Software, Databases, Models, Algorithms, Documentation, Instructions, Source Code, etc.			<b>3. SUBTITLE</b>	
<b>4. AUTHORITY (Data Acquisition Document No.)</b>		<b>5. CONTRACT REFERENCE</b> Sections B, C, & H		<b>6. REQUIRING OFFICE</b> NRL Code (TBD)	
<b>7. DD FORM REQ</b> LT	<b>8. DMT STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> ONE/R	<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK. 16		<b>14. DISTRIBUTION</b>
<b>9. APP CODE</b>		<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> SEE BLK. 16		
<b>16. REMARKS</b> Block 12 - 30 days after completion of task or end of period of performance. Block 13 - 2 weeks after notification from the COR. This requirement shall include, but may not be limited to, computer models; data bases; algorithms; documentation; application software; utility software; upgrades; enhancements; updates or expansions to existing models, components or algorithms; computer processes, technical manuals and user's guides; user training manuals; software component and design manuals; source code; and executable code.  All deliverables shall be computer compatible and in the format specified by the COR in accordance with the Contract clause entitled "Technical Direction Memorandum"				<b>15. TOTAL</b>	
				2	

  

<b>1. DATA ITEM NO.</b> A004		<b>2. TITLE OF DATA ITEM</b> Individual Task Reports		<b>3. SUBTITLE</b>	
<b>4. AUTHORITY (Data Acquisition Document No.)</b>		<b>5. CONTRACT REFERENCE</b> Contract Section C.3.1.1 - C.3.7.2		<b>6. REQUIRING OFFICE</b> NRL CODE (TBD)	
<b>7. DD FORM REQ</b> LT	<b>8. DMT STATEMENT REQUIRED</b>	<b>10. FREQUENCY</b> ONE/R	<b>12. DATE OF FIRST SUBMISSION</b> SEE BLK. 16		<b>14. DISTRIBUTION</b>
<b>9. APP CODE</b>		<b>11. AS OF DATE</b>	<b>13. DATE OF SUBSEQUENT SUBMISSION</b> SEE BLK. 16		
<b>16. REMARKS</b> Block 12 - 45 days after completion of Task. Block 13 - 2 weeks after notification from COR.  For the purpose of this document, "Individual Task Reports" shall include all documents and reports required under Enclosure (3) to this Exhibit (See Enclosure (3) to Exhibit A for specific reporting requirements).  The Contractor shall provide a final report on the technical status of each task. The report may consist of copies of publications or reports submitted to task sponsors, or may be a comprehensive summary of accomplishments achieved or findings uncovered under each task.				<b>15. TOTAL</b>	
				2	

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

**G. PREPARED BY**  
RICHARD D. SEWELL  
DD Form 1423-2, JUN 98  
1054/03

**H. DATE**  
02 AUG 1999

**L. APPROVED BY**  
  
**J. DATE**

Previous editions are obsolete.

**ENCLOSURE (1) TO DD FORM 1423  
INSTRUCTIONS FOR DISTRIBUTION**

**DISTRIBUTION OF TECHNICAL REPORTS**

The minimum distribution of **technical reports** and the **final report** submitted in connection with this contract is as follows:

ADDRESSEE	DODAAD CODE	UNLIMITED	NUMBER OF COPIES	
			UNCLASSIFIED/ AND CLASSIFIED	UNCLASSIFIED/LIMITED
COR Naval Research Laboratory Code: 4555 Overlook Ave., S.W. Washington, DC 20375-5320	N00173	1	1	
Administrative Contracting Officer		1	1	
Director Naval Research Laboratory ATTN: Code: 5227 4555 Overlook Ave., S.W. Washington, DC 20375-5326	N00173	1	1	
Defense Technical Information Center (DTIC) 8725 John J. Kingman Rd. Suite #0944 Fort Belvoir, VA 22060-6218	S47031	4	2	

**DISTRIBUTION OF NON-TECHNICAL REPORTS**

The minimum distribution of non-technical reports submitted in connection with this contract is as follows:

ADDRESSEE	DODAAD CODE	UNLIMITED	NUMBER OF COPIES	
			UNCLASSIFIED/ AND CLASSIFIED	UNCLASSIFIED/LIMITED
COR	N00173	1	1	
Administrative Contracting Officer (DCMAO)		1	1	

ENCLOSURE NUMBER 2 TO DD FORM 1423  
CONTRACT DATA REQUIREMENTS LIST

1. INSTRUCTIONS FOR MONTHLY COST AND PERFORMANCE REPORTING REQUIREMENTS

This report shall specify:

1. Contract Number;
2. Reporting Period Covered by Report;
3. Total Amount Funded for Contract;
4. \*Total Amount Invoiced to Date;
5. \*Total Amount Invoiced for this Reporting Period ;
6. Estimated Cost to complete - with explanation if more than Total Amount Funded for Contract (See # 3, above);
7. Schedule Status - indicate if efforts are on schedule, or if not, indicate reason(s) for delay and how it affects final delivery;
8. Contractor hours expended on NRL property. This portion of the report shall include the following information: (a) employee name; (b) number of hours worked; and (c) specific contract task involved for each employee;
9. Technical Progress - brief narrative indicating technical progress made, significant accomplishments or meetings attended and/or participated in;
10. Briefs/Reports generated;
11. Travel Activity;
12. Plans for next month;
13. Technical problem areas and potential solutions.

\*This shall also include a breakdown by ACRNs prorated in proportion to the unliquidated balance. (See Section G.)

ENCLOSURE NUMBER 3 TO DD FORM 1423  
CONTRACT DATA REQUIREMENTS LIST

SPECIFIC REPORTING REQUIREMENTS FOR CDRL A004 TASK REPORTS

(1) SUBTASK 1.1

In accordance with Contract Section C.3.1.1, the Contractor shall provide the Government with a task report which shall describe the analysis of mission profiles and Intelligence Agency threat documents relevant to Naval aircraft which assess the adequacy of existing onboard avionics systems to meet currently deployed and projected threats.

(1) SUBTASK 1.2

In accordance with Contract Section C.3.1.2, the Contractor shall provide the Government with a task report which shall (a) describe those threat systems where requirements documents for threat solutions are deficient; and (b) provide a priority ordering with a detailed rationale for addressing these deficiencies.

(2) SUBTASK 1.3

In accordance with Contract Section C.3.1.3, the Contractor shall provide the Government with a task report which shall (a) describe specific combinations of missions/avionics/threats where deficiencies exist, and (b) make recommendations for insertion and incorporation of new or improved technological capabilities to remedy these deficiencies.

(3) SUBTASK 1.4

In accordance with Contract Section C.3.1.4, the Contractor shall provide the Government with a task report which shall (a) describe those existing capabilities within the Navy, other Services, and Industry which were subject to review; and (b) identify those capabilities which provide cost-effective alternatives to mission and avionics deficiencies.

(4) SUBTASK 1.5

In accordance with Contract Section C.3.1.5, the Contractor shall provide the Government with a task report which shall describe the projected impact of introducing new or modified avionics into both current operational systems and projected systems.

(5) SUBTASK 1.6

In accordance with Contract Section C.3.1.6, the Contractor shall provide the Government with a task report which shall (a) document the Contractor's analysis of EO/IR advanced technology research and development programs; (b) compare alternatives for implementing solutions to deficiencies; and (c) contrast those alternatives in terms of cost, schedule, and performance.

(6) SUBTASK 1.7

In accordance with Contract Section C.3.1.7, the Contractor shall provide the Government with a task report which shall provide the rationale and justifications necessary to support decisions for transitioning those new technologies capable of addressing previously-identified deficiencies into the next stage of development.

(7) SUBTASK 2.1

In accordance with Contract Section C.3.2.1, the Contractor shall provide the Government with a task report which shall provide a detailed description of the modifications, refurbishments, payload designs, payload alterations, aircraft installations and de-installations, maintenance, and fabrication of unique systems undertaken in response to Subtask 2.1.

(8) SUBTASK 2.2

In accordance with Contract Section C.3.2.2, the Contractor shall provide the Government with a task report which shall describe efforts made to design and mount (a) environmental sensors, (b) threat warning sensors, (c) pointer tracker systems, (d) reconnaissance systems, (e) cameras, (f) multi-spectral sensors, and (g) various other instrumentation packages to pods and R&D platforms on manned and unmanned aircraft.

(9) SUBTASK 2.3

In accordance with Contract Section C.3.2.3, the Contractor shall provide the Government with a task report which shall provide the necessary documents for initiation and approval of flight certifications for aircraft payloads, pod designs, and pod modifications.

(10) SUBTASK 2.4

In accordance with Contract Section C.3.2.4, the Contractor shall provide the Government with a task report which shall provide (a) developmental and engineering drawings, and (b) descriptions of analysis procedures and results, pursuant to fabrication of new system designs, system modifications, and system refurbishments.

(11) SUBTASK 2.5

In accordance with Contract Section C.3.2.5, the Contractor shall provide the Government with a task report which shall provide detailed descriptions and recommendations concerning the fabrication facilities to be used in constructing the hardware required under this Task.

(12) SUBTASK 3.1

In accordance with Contract Section C.3.3.1, the Contractor shall provide the Government with a task report which shall provide measurement results, evaluation plans, and schedules which shall define the logical flow of new or modified sensor systems from the laboratory and field-testing through proof-of-concept flight tests.

(13) SUBTASK 3.2

In accordance with Contract Section C.3.3.2, the Contractor shall provide the Government with a task report which shall provide and describe an assessment methodology for determining the effects of environmental conditions on advanced EO/IR system performance.

(14) SUBTASK 3.3

In accordance with Contract Section C.3.3.3, the Contractor shall provide the Government with a task report which shall (a) assess current measurement and evaluation capabilities; and (b) make recommendations concerning identification and utilization of cost effective measurement and evaluation facilities.

(15) SUBTASK 3.4

In accordance with Contract Section C.3.3.4, the Contractor shall provide the Government with a task report which shall define and detail the measurement and evaluation resources required to perform proof of concept flight testing.

(16) SUBTASK 3.5

In accordance with Contract Section C.3.3.5, the Contractor shall provide the Government with a task report which shall provide detailed test plans for planning, coordinating, scheduling, and executing airborne and ground-based technical assessments.

(18) SUBTASK 3.6

In accordance with Contract Section C.3.3.6, the Contractor shall provide the Government with a task report which shall provide test plans which detail the conduct of flight planning, ground station site coordination, and resource planning required to support system demonstrations and analysis.

(19) SUBTASKS 3.7

In accordance with Contract Section C.3.3.7, the Contractor shall provide the Government with a task report which shall provide detailed documentation of mechanisms reviewed or established for to facilitate technical interfaces with other contractors and other Navy units.

(20) SUBTASK 3.8

In accordance with Contract Section C.3.3.8, the Contractor shall provide the Government with a task report which shall (a) include a detailed review of the data acquired from laboratory and field test, (b) include an independent analysis of the results, and (c) provide an analysis of the effort performed to utilize existing simulations and models for extrapolation and interpolation of the results of the aforementioned tests, pursuant to the estimation of the probable performance of the systems or technologies under the expected range of operational conditions.

(21) SUBTASK 4.1

In accordance with Contract Section C.3.4.1, the Contractor shall provide the Government with a task report which shall include comprehensive descriptions of the deployed systems in sufficient detail to fully characterize their collected data sets.

(22) SUBTASK 4.2

In accordance with Contract Section C.3.4.2, the Contractor shall provide the Government with a task report which shall provide an analysis of the collected data sets for the purpose of determining which information is complimentary to the data acquired by EO/IR systems.

(23) SUBTASK 4.3

In accordance with Contract Section C.3.4.3, the Contractor shall provide the Government with a task report which shall provide an assessment of possible tradeoffs available in the design of new EO/IR systems which may (a) reduce costs, (b) improve the usefulness of system data, or (c) otherwise take advantage of the presence of other sensor systems.

(24) SUBTASK 5.1

In accordance with Contract Section C.3.5.1, the Contractor shall provide the Government with a task report which shall provide an evaluation of the interoperability and the application of technology between airborne and shipboard EO/IR advanced systems. This report shall include an evaluation of the interoperability of complex EO/IR avionics systems with current or near term RF systems.

(25) SUBTASK 5.2

In accordance with Contract Section C.3.5.2, the Contractor shall provide the Government with a task report which shall provide an analysis of the potential cost savings and the potential improvements which may accrue to the database from the use of complimentary sensor systems.

(26) SUBTASK 5.3

In accordance with Contract Section C.3.5.3, the Contractor shall provide the Government with a task report which shall provide technical and engineering evaluations for assessment of the operational performance of advanced technology RF programs with conceptual EO/IR R&D programs.

(27) SUBTASK 5.4

In accordance with Contract Section C.3.5.4, the Contractor shall provide the Government with a task report which shall provide a detailed assessment of other Government users capable of using the EO/IR technology developed under this program.

(28) SUBTASK 5.5

In accordance with Contract Section C.3.5.5, the Contractor shall provide the Government with a task report which shall provide a technical analysis of (a) the application of baseline IR decoy designs, and (b) their impact on the utilization of EO/IR sensors.

(29) SUBTASK 6.1

In accordance with Contract Section C.3.6.1, the Contractor shall provide the Government with a task report which shall provide a program plan which addresses (a) technical planning and coordination, (b) engineering investigation and program scheduling, (c) tracking, and (d) analysis for on-board sensor systems suitable for entry to Advanced Development, Test and Evaluation, and Engineering and Manufacturing Development.

(30) SUBTASK 6.2

In accordance with Contract Section C.3.6.2, the Contractor shall provide the Government with a task report which shall provide detailed descriptions of measurement results, modeling, analysis, and integration concepts associated with the reconnaissance sensor systems under consideration for development. The report shall detail the scientific, engineering, and technical reports which support development of the recommended reconnaissance sensor systems for use on the P-3, S-3, and other Navy tactical aircraft .

(31) SUBTASK 6.3

In accordance with Contract Section C.3.6.3, the Contractor shall provide the Government with a task report which shall provide design concepts for sensor systems with maximal commonality that are suited for use on multiple Navy tactical aircraft. The design concepts shall identify (a) common design requirements and constraints, (b) critical requirement differences, and (c) recommended component, assembly, sub-assembly, and interface designs capable of meeting the performance requirements at minimal design cost, weight, and power requirements.

(32) SUBTASK 6.4

In accordance with Contract Section C.3.6.4, the Contractor shall provide the Government with a task report which shall include the test program plans and measurement plans required to implement the technical demonstrations necessary for transitioning the systems concepts to the next stage of systems development.

(33) SUBTASK 7.1

In accordance with Contract Section C.3.71., the Contractor shall provide the Government with a task report which shall detail the results of the design and implementation of sensor test systems for determining developmental sensor performance capabilities, sensor degradation with use, and overall reliability. The required report shall include recommended procedures (a) for integration, calibration and maintenance of test instrumentation, and (b) for developing test plans and associated documentation.

(34) SUBTASK 7.2

In accordance with Contract Section C.3.71., the Contractor shall provide the Government with a task report which shall assess and recommend a modeling and simulation capability suitable for reconnaissance systems. The report shall include plans and recommendations on how to best utilize such a modeling and simulation capability to reduce the design risks and to optimize the number and types of field testing required.