

# **CONTRACT NNL10AA07B**

## **(Contract)**

The following information has been determined to be exempt from disclosure and has been deleted from the contract:

- Name of subcontractor and monetary amounts in Clause H.5 “Small Disadvantaged Business Participation-Contract Targets,” Page 24
- Exhibit D- Organizational Conflicts of Interest (OCI) Avoidance Plan
- Exhibit E- Quality Plan
- Exhibit G- IT Security Implementation Plan
- Exhibit H- Individual Subcontracting Plan
- Exhibit I- Small Business Subcontracting Goals
- Exhibit L- Task Order Schedule of Rates

Exhibits D, E, G, H, I, and L are replete with proprietary information. Because there are no reasonably segregable portions that are subject to release, these plans are being withheld in their entirety.

The deleted material is exempt from disclosure under 14 C.F.R. 1206.300(b)(4) which covers trade secrets and commercial or financial information obtained from a person and privileged and confidential information. It has been held that commercial or financial material is “confidential” for purposes of this exemption if its disclosure would be likely to have either of the following effects: (1) impair the Government’s ability to obtain necessary information in the future; or (2) cause substantial harm to the competitive position of the person from whom the information was obtained, National Parks and Conservation v. Morton, 498 F.2d 765 (D.C. Cir. 1974).

<b>SOLICITATION, OFFER AND AWARD</b>		1 THIS CONTRACT IS A RATED ORDER UNDER CPAS (15 CFR 700)		RATING DC -	PAGE 1 OF 42		
2. CONTRACT NUMBER <b>NNL10AA07B</b>	3. SOLICITATION NUMBER <b>NNL09ZB1003R</b>	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)	5. DATE ISSUED	6. REQUISITION/PURCHASE NUMBER <b>4200302546</b>			
7. ISSUED BY <b>NASA Langley Research Center 9A Langley Boulevard Hampton, VA 23681-2199</b>		CCODE <b>LARC</b>	8. ADDRESS OFFER TO (If other than Item 7) <b>NASA Langley Research Center MS 144/Bid Distribution Office 9A Langley Blvd., Bldg. 1195A, Room 124 HAMPTON VA 23681-2199</b>				
NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder"							
<b>SOLICITATION</b>							
9. Sealed offers in original and <u>6</u> copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handwritten, in the depository located in <u>9A Langley Blvd., Building 1195B, Room 124</u> until <u>2:00 p.m.</u> local time <u>09/03/2009</u> (Hour) (Date)							
CAUTION - LATE Submissions, Modifications, and Withdrawals: Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.							
10. FOR INFORMATION CALL:	A. NAME <b>Conception Snapp</b>	B. TELEPHONE (NO COLLECT CALLS) AREA CODE <b>(757)</b> NUMBER <b>864-7928</b> EXT.		C. EMAIL ADDRESS <b>c.snapp@nasa.gov</b>			
<b>11. TABLE OF CONTENTS</b>							
(X)	SEC	DESCRIPTION	PAGE(S)	(X)	SEC	DESCRIPTION	PAGE(S)
PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES			
<input checked="" type="checkbox"/>	A	SOLICITATION/CONTRACT FORM	1-2	<input checked="" type="checkbox"/>	I	CONTRACT CLAUSES	28-41
<input checked="" type="checkbox"/>	B	SUPPLIES OR SERVICES AND PRICES/COST	3-4	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH			
<input checked="" type="checkbox"/>	C	DESCRIPTION/SPECS/WORK STATEMENT	5	<input checked="" type="checkbox"/>	J	LIST OF ATTACHMENTS	42
<input checked="" type="checkbox"/>	D	PACKAGING AND MARKING	6	PART IV - REPRESENTATIONS AND INSTRUCTIONS			
<input checked="" type="checkbox"/>	E	INSPECTION AND ACCEPTANCE	7-8		K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	
<input checked="" type="checkbox"/>	F	DELIVERIES OR PERFORMANCE	9-10		L	INSTRS., CONDS., AND NOTICES TO OFFERORS	
<input checked="" type="checkbox"/>	G	CONTRACT ADMINISTRATION DATA	11-19		M	EVALUATION FACTORS FOR AWARD	
<input checked="" type="checkbox"/>	H	SPECIAL CONTRACT REQUIREMENTS	20-27				
<b>OFFER (Must be fully completed by offeror)</b>							
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 (%) <b>NT30</b>	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 <b>NORTHROP GRUMMAN SYSTEM CORP ONE HORNET WAY EL SEGUNDO CA 90245-2804</b>		CODE <b>76823</b>	FACILITY	15. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) <b>Valerie Lewis Corder, AP&amp;T Contracts Mgr.</b>			
15B. TELEPHONE NUMBER AREA CODE <b>310</b> NUMBER <b>332-0305</b> EXT.		15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE. ENTER SUCH ADDRESS IN SCHEDULE <input type="checkbox"/>		17. SIGNATURE 			
				18. OFFER DATE <b>3/12/2010</b>			
<b>AWARD (To be completed by Government)</b>							
19. ACCEPTED AS TO ITEMS NUMBERED		20. AMOUNT <b>\$0.00</b>		21. ACCOUNTING AND APPROPRIATION <b>See schedule</b>			
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION <input type="checkbox"/> 10 U.S.C. 2304(c)( ) <input type="checkbox"/> 10 U.S.C. 2304(c)( )		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)		ITEM			
24. ADMINISTERED BY (If other than Item 7) <b>See Schedule G.</b>		CODE <b>LARC</b>	25. PAYMENT WILL BE MADE BY <b>NASA Shared Services Center Building 1111, C. Road Stennis Space Center, MS 39529-6000</b>		CODE <b>NSSC</b>		
26. NAME OF CONTRACTING OFFICER (Type or print) <b>Susan E. McClain</b>		27. UNITED STATES OF AMERICA  (Signature of Contracting Officer)		28. AWARD DATE <b>04/13/10</b>			

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

Previous edition is unusable

STANDARD FORM 33 (Rev. 9-97)  
Prescribed by GSA - FAR (48 CFR) 53.214(c)

<b>CONTINUATION SHEET</b>		REFERENCE NO. OF DOCUMENT BEING CONTINUED NNL10AA07B		PAGE 2	OF 42
NAME OF OFFEROR OR CONTRACTOR NORTHROP GRUMMAN SYSTEM CORP					
ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
001	The Government will order services under this CLIN by issuance of Cost-Plus-Fixed-Fee Task Orders, pursuant to Section H.3, Task Ordering Procedure (NFS 1852.216-80). Structures, Materials, Aerodynamics, Aerothermodynamics, and Acoustics Research and Technology for aerospace vehicles - the contractor shall furnish all personnel, facilities, equipment, material, supplies, and services, except as may be expressly set forth in the Contract task orders as Government furnished, and otherwise do all things necessary to, or incident to, perform and provide the work efforts described in the Performance Work Statement (Exhibit A).				0.00

**PART I – THE SCHEDULE**

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**SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS**

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**B.1 SUPPLIES AND/OR SERVICES TO BE PROVIDED**

The Contractor shall provide all resources (except as may be expressly stated in the contract as furnished by the Government) necessary to deliver and/or perform the items below in accordance with the Description/Specifications/Statement of Work incorporated Performance Work Statement (PWS), Section J, Exhibit A.

**CLIN 0001** The Government will order services under this CLIN by issuance of Cost-Plus-Fixed Fee Task Orders, pursuant to Section H.3, Task Ordering Procedure (NFS 1852.216-80).

**B.2 MINIMUM AND MAXIMUM INDEFINITE DELIVERY, INDEFINITE QUANTITY (IDIQ) CONTRACT VALUE**

The guaranteed minimum quantity of work which will be required under this contract, and which will be initiated through the issuance of task orders, is \$10,000 per award. There will be no further obligation on the part of the Government to issue additional task orders thereafter. The total maximum value is \$400,000,000 for the 5-year period of performance (total of all multiple award contracts).

**B.3 ESTIMATED COST AND FIXED FEE (NFS 1852.216-74)(DEC 1991)**

The estimated cost and fixed fee of the contract is the sum of the estimated costs and fixed fee set forth for individual task orders issued by the Government pursuant to H.3, Task Ordering Procedure.

**B.4 CONTRACT FUNDING (1852.232-81)(JUN 1990)**

- (a) For purposes of payment of cost, exclusive of fee, in accordance with the Limitation of Funds clause, the total amount allotted by the Government to this contract is the amount set forth in task orders. This allotment is for the Performance of Work in accordance with the limitations and completion dates as set forth in task orders authorized by the Contracting Officer
- (b) An additional amount is obligated under each task order for the payment of fee.
- (c) The Limitation of Funds Clause FAR 52.232-22 (APR 1984) applies at the task order level.

**B.5 NAMING/NUMBERING SCHEME FOR CLAUSES IN FULL TEXT AND FOR CLAUSES INCORPORATED BY REFERENCE (LaRC 52.201-90)(Aug 2008)**

There are various types of clauses contained in the contract. Most clauses will reference a numbered cite such as: Federal Acquisition Regulation (FAR 52.#); NASA FAR Supplement (NFS 1852.#); or Langley Research Center (LaRC 52.#). There are also clauses that have no designation. Those clauses were written specifically for this contract by LaRC or are generic Agency clauses specific for this contract type and no numbered cite exists.

[END OF SECTION]

**SECTION C - DESCRIPTION/SPECIFICATIONS/PERFORMANCE WORK  
STATEMENT**

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**C.1 SPECIFICATION/PERFORMANCE WORK STATEMENT**

The Contractor shall provide the item or services specified in Section B in accordance with the The Performance Work Statement (PWS) which is located in Section J, Exhibit A.

[END OF SECTION]

**SECTION D - PACKAGING AND MARKING**

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**D.1 CLAUSES INCORPORATED BY REFERENCE -- SECTION D**

Clauses at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

**D.2 LISTING OF CLAUSES INCORPORATED BY REFERENCE – SECTION D**

NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

I. Federal Acquisition Regulation (48 CFR CHAPTER 1)

None included in this section by reference.

II. NASA FAR Supplement (48 CFR CHAPTER 18)

CLAUSE NUMBER	CLAUSE TITLE
1852.211-70	Packaging, Handling, and Transportation (sep 2005)

[END OF SECTION]

## **SECTION E - INSPECTION AND ACCEPTANCE**

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### **E.1 CLAUSES INCORPORATED BY REFERENCE - SECTION E**

Clauses at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

#### **I. Federal Acquisition Regulation (48 CFR CHAPTER 1)**

<b>CLAUSE NUMBER</b>	<b>CLAUSE TITLE</b>
<b>52.246-8</b>	<b>INSPECTION OF RESEARCH AND DEVELOPMENT COST-REIMBURSEMENT. (MAY 2001)</b>

#### **II. NASA FAR Supplement (48 CFR CHAPTER 18)**

None included by reference.

### **E.2 HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT (52.246-11)(FEB 1999)**

The Contractor shall comply with the higher-level quality standard selected below.

Title:

- ☒ ISO 9001, Quality Management Systems Requirements  
☒ AS9100, Quality Management Systems - Aerospace - Requirements

(End of clause)

### **E.3 MATERIAL INSPECTION AND RECEIVING REPORT (1852.246-72)(AUG 2003)**

- (a) At the time of each delivery to the Government under this contract, the Contractor shall furnish a Material Inspection and Receiving Report (DD Form 250 series) prepared in 5 copies, an original and 4 copies.
- (b) The Contractor shall prepare the DD Form 250 in accordance with NASA FAR Supplement 1846.6. The Contractor shall enclose the copies of the DD Form 250 in the package or seal them in a waterproof envelope, which shall be securely attached to the exterior of the package in the most protected location.
- (c) When more than one package is involved in a shipment, the Contractor shall list on the DD Form 250, as additional information, the quantity of packages and the package numbers. The Contractor shall forward the DD Form 250 with the lowest numbered package of the shipment



and print the words "CONTAINS DD FORM 250" on the package.

(End of clause)

[END OF SECTION]

## **SECTION F - DELIVERIES OR PERFORMANCE**

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### **F.1 CLAUSES INCORPORATED BY REFERENCE -- SECTION F**

Clauses at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of clause)

#### **I. Federal Acquisition Regulation (48 CFR CHAPTER 1)**

<b>CLAUSE NUMBER</b>	<b>CLAUSE TITLE</b>
<b>52.242-15</b>	<b>STOP-WORK ORDER (AUG 1989) – ALTERNATE I (APR 1984)</b>
<b>52.247-34</b>	<b>F.O.B. DESTINATION. (NOV 1991)</b>

#### **II. NASA FAR Supplement (48 CFR CHAPTER 18)**

None included by reference.

### **F.2 PERIOD OF PERFORMANCE**

The period of performance of this contract is 60 months from the effective date of the contract.

(End of clause)

### **F.3 DELIVERY REQUIREMENTS (LaRC 52.211-96)(APR 2007)**

A. Delivery is required to be made as specified in each task order.

B. Delivery shall be f.o.b. destination:

National Aeronautics and Space Administration  
 Langley Research Center  
 4 South Marvin Street (Bldg. 1206)  
 Hampton, VA 23681-2199  
**(Unless otherwise specified in each task order.)**

C. The Contractor shall notify the Contracting Officer's Technical Representative in writing at least 10 days prior to the scheduled delivery date with a copy of the notification to the Contract Specialist. The notification shall include, as a minimum, the dimensions and weight of each container, the scheduled delivery date, and any Government equipment/service needed for off-loading. Since internal coordination by the Government is necessary to assure the availability of

any required Government assistance, failure of the Contractor to comply with this notification requirement may result in delays in unloading the carrier at the f.o.b. destination site and related additional expenses to the Contractor (e.g., demurrage charges, re-delivery, etc.). The Contractor shall make delivery to the F.O.B. destination site between the hours of 8:30 a.m. to 2:30 p.m., Monday through Friday, Government holidays excepted, or as otherwise established as a result of the notification requirement cited above.

D. The Contractor shall instruct either its driver or the driver of the commercial carrier to obtain specific routing instructions to the delivery/installation site from the Transportation and Warehousing Section, 4 South Marvin Street, Building 1206, NASA, Langley Research Center. Failure to do so may cause lack of proper documentation of the delivery and related delays in NASA, Langley Research Center internal processing procedures and payment of the Contractor's invoice(s).

E. At delivery, the Government may provide personnel and equipment; e.g., forklift and/or crane service, as specified per each task order. Notwithstanding Government assistance, the Contractor shall retain full responsibility for equipment handling, even if a Contractor's representative is not present during this process.

(End of clause)

#### **F.4 PLACE OF PERFORMANCE - SERVICES**

The services to be performed under this contact shall be performed at the following location(s): the contractor's facility (Northrop Grumman Systems Corporation, One Hornet Way, El Segundo CA 90245-2804), at subcontractor facilities, and other sites as specified by each task order.

(End of clause)

[END OF SECTION]

## **SECTION G - CONTRACT ADMINISTRATION DATA**

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### **G.1 CLAUSES INCORPORATED BY REFERENCE - SECTION G**

Clauses at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of clause)

#### **I. Federal Acquisition Regulation (48 CFR CHAPTER 1)**

None included by reference.

#### **II. NASA FAR Supplement (48 CFR CHAPTER 18)**

<b>CLAUSE NUMBER</b>	<b>CLAUSE TITLE</b>
<b>1852.216-75</b>	<b>PAYMENT OF FIXED FEE (DEC 1988)</b>
<b>1852.227-70</b>	<b>NEW TECHNOLOGY (MAY 2002)</b>
<b>1852.242-73</b>	<b>NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING (NOV 2004)</b>

### **G.2 SUBMISSION OF VOUCHERS FOR PAYMENT (1852.216-87)(MAR 1998)**

(a) The designated billing office for cost vouchers for purposes of the Prompt Payment clause of this contract is indicated below. Public vouchers for payment of costs shall include a reference to the number of this contract.

(b) (1) If the contractor is authorized to submit interim cost vouchers directly to the NASA paying office, the original voucher should be submitted to:

NASA Shared Services Center  
 Financial Mgmt Division Accounts Payable  
 Bldg 1111, C. Road  
 Stennis Space Center, MS 39529  
 NSSC-AccountsPayable@nasa.gov  
 Fax: (866) 209-5415

(2) For any period that the Defense Contract Audit Agency has authorized the Contractor to submit interim cost vouchers directly to the Government paying office, interim vouchers are not required to be sent to the Auditor, and are considered to be provisionally approved for payment, subject to final audit.

(3) Copies of vouchers should be submitted as directed by the Contracting Officer.

(c) If the contractor is not authorized to submit interim cost vouchers directly to the paying office as described in paragraph (b), the contractor shall prepare and submit vouchers as follows:

(1) One original Standard Form (SF) 1034, SF 1035, or equivalent Contractor's attachment to:

Defense Contract Audit Agency  
Northrop Grumman El Segundo Resident Office  
One Hornet Way, Bldg. 902, M/S W5  
Phone: (310) 332-2766  
Fax: (310) 640-2357

(2) Four copies of SF 1034, SF 1035A, or equivalent Contractor's attachment to the following offices by insertion in the memorandum block of their names and addresses:

(i) Copy 1 NASA Contracting Officer

(ii) Copy 2 Auditor

(iii) Copy 3 Contractor

(iv) Copy 4 NSSC

(3) The Contracting Officer may designate other recipients as required.

(d) Public vouchers for payment of fee shall be prepared similarly to the procedures in paragraphs (b) or (c) of this clause, whichever is applicable, and forwarded to:

NASA Shared Services Center  
Financial Mgmt Division Accts Payable  
Bldg 1111, C. Road  
Stennis Space Center, MS 39529  
email: [NSSC-AccountsPayable@nasa.gov](mailto:NSSC-AccountsPayable@nasa.gov)  
Fax: 866-209-5415

(1) This is the designated billing office for fee vouchers for purposes of the Prompt Payment clause of this contract.

(2) Fixed fee shall be paid in monthly installments based upon the percentage of completion of work as determined by the Contracting Officer. The following formulas are provided as a convenience for calculating the interim fee provided the formulas produce a reasonable percentage as compared to completion of work. You should show both formulas on your fee voucher, however, the maximum fee percentage for fee billing is the smaller of the percentages resulting from the application of the

two formulas. If at any time the Contracting Officer determines that the fee percentage is not concert with the completion of work, the fee formula will be adjusted, or another methodology that results in comparative fee billing agree upon.

(a) Cost Incurred to Date/Contract Estimated Cost = \_\_\_\_ %

OR

(b) Months of Performance Expended to Date/  
Contract Period of Performance (Months) = \_\_\_\_ %

(e) In the event that amounts are withheld from payment in accordance with provisions of this contract, a separate voucher for the amount withheld will be required before payment for that amount may be made.

(End of clause)

### **G.3 Reserved**

### **G.4 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (1852.227-72)(JUL 1997)**

(a) For purposes of administration of the clause of this contract entitled "New Technology" or "Patent Rights - Retention by the Contractor (Short Form)," whichever is included, the following named representatives are hereby designated by the Contracting Officer to administer such clause:

New Technology Representative  
Contracting Officer Technical Representative  
M/S 162  
NASA Langley Research Center  
Hampton, VA 23681-2199

Patent Representative  
Office of Chief Counsel  
M/S 141  
NASA Langley Research Center  
Hampton, VA 23681-2199

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquires or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any

subcontract hereunder requiring a "New Technology" clause or "Patent Rights - Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

(End of clause)

#### **G.5 CONTRACTOR REQUESTS FOR GOVERNMENT-PROVIDED PROPERTY (1852.245-70)(DEVIATION)(SEP 2007)**

(a) The Contractor shall provide all property required for the performance of this contract. The Contractor shall not acquire or construct items of property to which the Government will have title under the provisions of this contract without the Contracting Officer's written authorization. Property which will be acquired as a deliverable end item as material or as a component for incorporation into a deliverable end item is exempt from this requirement.

(b) (1) In the event the Contractor is unable to provide the property necessary for performance, and the Contractor requests provision of property by the Government, the Contractor's request shall--

- (i) Justify the need for the property;
- (ii) Provide the reasons why contractor-owned property cannot be used;
- (iii) Describe the property in sufficient detail to enable the Government to screen its inventories for available property or to otherwise acquire property, including applicable manufacturer, model, part, catalog, National Stock Number or other pertinent identifiers;
- (iv) Combine requests for quantities of items with identical descriptions and estimated values when the estimated values do not exceed \$100,000 per unit; and
- (v) Include only a single unit when the acquisition or construction value equals or exceeds \$100,000.

(2) Contracting Officer authorization is required for items the Contractor intends to manufacture as well as those it intends to purchase.

(3) The Contractor shall submit requests to the Contracting Officer no less than 30 days in advance of the date the Contractor would, should it receive authorization, acquire or begin fabrication of the item.

(c) The Contractor shall maintain copies of Contracting Officer authorizations, appropriately cross-referenced to the individual property record, within its property management system.

(d) Property furnished from Government excess sources is provided as-is, where-is. The Government makes no warranty regarding its applicability for performance of the contract or its ability to operate. Failure of property obtained from Government excess sources under this clause is insufficient reason for submission of requests for equitable adjustments discussed in the clause at 52.245-1, Government Property.

(End of clause)

#### **G.6 FINANCIAL REPORTING OF NASA PROPERTY IN THE CUSTODY OF CONTRACTORS (1852.245-73)(OCT 2003)**

(a) The Contractor shall submit annually a NASA Form (NF) 1018, NASA Property in the Custody of Contractors, in accordance with the provisions of 1845.505-14, the instructions on the form, subpart 1845.71, and any supplemental instructions for the current reporting period

issued by NASA.

(b)(1) Subcontractor use of NF 1018 is not required by this clause; however, the Contractor shall include data on property in the possession of subcontractors in the annual NF 1018.

(2) The Contractor shall mail the original signed NF 1018 directly to the cognizant NASA Center Deputy Chief Financial Officer, Finance, unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(3) One copy shall be submitted (through the Department of Defense (DOD) Property Administrator if contract administration has been delegated to DOD) to the following address:

NASA Langley Research Center  
Industrial Property Officer  
M/S 377  
Hampton, VA 23681-2199

NASA Langley Research Center  
Financial Management Office, Property Management  
M/S 175  
Hampton, VA 23681-2199,

unless the Contractor uses the NF 1018 Electronic Submission System (NESS) for report preparation and submission.

(c)(1) The annual reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by October 15. The information contained in these reports is entered into the NASA accounting system to reflect current asset values for agency financial statement purposes. Therefore, it is essential that required reports be received no later than October 15. Some activity may be estimated for the month of September, if necessary, to ensure the NF 1018 is received when due. However, contractors' procedures must document the process for developing these estimates based on planned activity such as planned purchases or NASA Form 533 (NF 533 Contractor Financial Management Report) cost estimates. It should be supported and documented by historical experience or other corroborating evidence, and be retained in accordance with FAR Subpart 4.7, Contractor Records Retention. Contractors shall validate the reasonableness of the estimates and associated methodology by comparing them to the actual activity once that data is available, and adjust them accordingly. In addition, differences between the estimated cost and actual cost must be adjusted during the next reporting period. Contractors shall have formal policies and procedures, which address the validation of NF 1018 data, including data from subcontractors, and the identification and timely reporting of errors. The objective of this validation is to ensure that information reported is accurate and in compliance with the NASA FAR Supplement. If errors are discovered on NF 1018 after submission, the contractor shall contact the cognizant NASA Center Industrial Property Officer (IPO) within 30 days after discovery of the error to discuss corrective action.



(2) The Contracting Officer may, in NASA's interest, withhold payment until a reserve not exceeding \$25,000 or 5 percent of the amount of the contract, whichever is less, has been set aside, if the Contractor fails to submit annual NF 1018 reports in accordance with 1845.505-14 and any supplemental instructions for the current reporting period issued by NASA. Such reserve shall be withheld until the Contracting Officer has determined that NASA has received the required reports. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government right.

(d) A final report shall be submitted within 30 days after disposition of all property subject to reporting when the contract performance period is complete in accordance with (b)(1) through (3) of this clause.

(End of clause)

#### **G.7 IDENTIFICATION AND MARKING OF GOVERNMENT EQUIPMENT (1852.245-74)(DEVIATION) (SEP 2007)**

(a) The Contractor shall identify all equipment to be delivered to the Government using NASA Technical Handbook (NASA-HDBK) 6003, "Application of Data Matrix Identification Symbols to Aerospace Parts Using Direct Part Marking Methods/Techniques", and NASA Standard (NASA-STD) 6002, "Applying Data Matrix Identification Symbols on Aerospace Parts". This includes deliverable equipment listed in the schedule and other equipment when NASA directs physical transfer to NASA or a third party. The Contractor shall identify property in both machine and human readable form unless the use of a machine readable-only format is approved by the NASA Industrial Property Officer.

(b) Property shall be marked in a location that will be human readable, without disassembly or movement of the property, when the items are placed in service unless such placement would have a deleterious effect on safety or on the item's operation.

(c) Concurrent with equipment delivery or transfer, the Contractor shall provide the following data in an electronic spreadsheet format:

(1) Item Description.

(2) Unique Identification Number (License Tag).

(3) Unit Price.

(4) An explanation of the data used to make the unique identification number.

(d) For items physically transferred under paragraph (a) the following additional data is required:

(1) Date originally placed in service.

(2) Item condition.

(3) Date last serviced.

(e) The data required in paragraphs (c) and (d) shall be delivered to the NASA center receiving activity listed below: TBD

(f) The contractor shall include the substance of this clause, including this paragraph (f), in all subcontracts that require delivery of equipment.

(End of clause)

#### **G.8 PROPERTY MANAGEMENT CHANGES (1852.245-75 )(DEVIATION)(SEP 2007)**

(a) The Contractor shall submit any changes to standards and practices used for management and control of Government property under this contract to the assigned property administrator and Industrial Property Officer (IPO), prior to making the change whenever the change -

(1) Employs a standard that allows increase in thresholds or changes the timing for reporting loss, damage, or destruction of property;

(2) Alters physical inventory timing or procedures;

(3) Alters recordkeeping practices;

(4) Alters practices for recording the transport or delivery of Government property; or

(5) Alters practices for disposition of Government property.

(b) The Contractor shall contact the IPO at:

Susan Tillman  
NASA Langley Research Center  
MS 377, Bldg 1169, Room 117  
Hampton, VA 23681-2199  
Phone: (787) 864-2064; e-mail: [susan.c.tillman@nasa.gov](mailto:susan.c.tillman@nasa.gov)

(End of clause)

#### **G.9 LIST OF GOVERNMENT PROPERTY FURNISHED PURSUANT TO FAR 52.245-1 (DEVIATION)(1852.245-76)(SEP 2007)**

(a) For performance of work under this contract, the Government will make available Government property identified below or in Attachment N/A of this contract on a no-charge-for-use basis pursuant to the clause at FAR 52.245-1, Government Property. The Contractor shall use this property in the performance of this contract at applicable sites, on a task order basis, and at

other location(s) as may be approved by the Contracting Officer. Under FAR 52.245-1, the Contractor is accountable for the identified property.

Item Description	Acquisition Date	Acquisition Cost	Quantity	If equipment		
				Manufacturer	Model	Serial No.
To be provided on a task order basis						

(End of clause)

#### **G.10 PHYSICAL INVENTORY OF CAPITAL PERSONAL PROPERTY (DEVIATION) (1852.245-78) (SEP 2007)**

(a) In addition to physical inventory requirements under the clause at FAR 52.245-1, Government Property, the Contractor shall conduct annual physical inventories for individual property items with an acquisition cost exceeding \$100,000.

(1) The Contractor shall inventory --

- (i) Items of property furnished by the Government;
- (ii) Items acquired by the Contractor and titled to the Government under the clause at FAR 52.245-1;
- (iii) Items constructed by the Contractor and not included in the deliverable, but titled to the Government under the clause at FAR 52.245-1; and
- (iv) Complete but undelivered deliverables.

(2) The Contractor shall use the physical inventory results to validate the property record data, specifically location, condition and use status, and to prepare summary reports of inventory as described in paragraph (c) of this clause.

(b) Unless specifically authorized in writing by the NASA Industrial Property Officer (IPO), the inventory shall be performed and posted by individuals other than those assigned custody of the items, responsibility for maintenance, or responsibility for posting to the property record. The Contractor may request a waiver from this separation of duties requirement from the NASA IPO, when all of the conditions in either (1) or (2) below are met.

(1) The Contractor utilizes an electronic system for property identification, such as a laser bar-code reader or radio frequency identification reader, and

(i) The programs or software preclude manual data entry of inventory identification data by the individual performing the inventory; and

(ii) The inventory and property management systems contain sufficient management controls to prevent tampering and assure proper posting of collected inventory data.

(2) The Contractor has limited quantities of property, limited personnel, or limited property systems; and,

(i) The Contractor provides written confirmation that the Government property exists in the recorded condition and location; and

(ii) The items continue to be used exclusively for performance of the contract or as otherwise authorized by the Contracting Officer.

(3) The Contractor shall submit the request to the cognizant property administrator and obtain approval from the IPO prior to implementation of the practice.

(c) The Contractor shall report the results of the physical inventory to the property administrator and the NASA Industrial Property Officer within 10 calendar days of completion of the physical inventory. The report shall --

(1) Provide a summary showing number and value of items inventoried; and

(2) Include additional supporting reports of --

(i) Loss, damage or destruction, in accordance with the clause at 52.245-1, Government Property;

(ii) Idle property available for reuse or disposition; and

(iii) A summary of adjustments made to location, condition, status, or user as a result of the physical inventory reconciliation.

(d) The Contractor shall retain all physical inventory records, including records of all transactions associated with inventory reconciliation. All records shall be subject to Government review and/or audit.

(End of clause)

[END OF SECTION]

## SECTION H - SPECIAL CONTRACT REQUIREMENTS

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### H.1 CLAUSES INCORPORATED BY REFERENCE -- SECTION H

Clauses at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of clause)

#### I. Federal Acquisition Regulation (48 CFR CHAPTER 1)

None included by reference.

#### II. NASA FAR Supplement (48 CFR CHAPTER 18)

CLAUSE NUMBER	CLAUSE TITLE
1852.223-72	SAFETY AND HEALTH (SHORT FORM) (APR 2002)
1852.223-75	MAJOR BREACH OF SAFETY OR SECURITY (FEB 2002)
1852.225-70	EXPORT LICENSES (FEB 2000) Fill in: (b) NASA, Langley Research Center
1852.235-73	FINAL SCIENTIFIC AND TECHNICAL REPORTS (Alternate II)(DEC 2006)
1852.244-70	GEOGRAPHIC PARTICIPATION IN THE AEROSPACE PROGRAM (APR 1985)

### H.2 LIMITATION OF FUTURE CONTRACTING (DEC 1988)

(a) The Contracting Officer has determined that this acquisition may give rise to a potential organizational conflict of interest. Accordingly, the attention of prospective offerors is invited to FAR Subpart 9.5--Organizational Conflicts of Interest.

(b) The nature of this conflict is that the Contractor may (1) have access to proprietary information or data of other contractors and/or Government sensitive, nonpublic information or data, which information or data may provide the Contractor with an unfair competitive advantage with regard to a competitive acquisition; (2) evaluate or assess the work product of the Contractor or of the Contractor's competitors; and/or (3) prepare, or assist in preparing, specifications or work statements to be used in a competitive acquisitions.

(c) The restrictions upon future contracting are as follows:

(1) If the Contractor, under the terms of this contract, or through the performance of tasks pursuant to this contract, is required to develop specifications or statements of work that are to be incorporated into a solicitation, the Contractor shall be ineligible to perform the work described in that solicitation as a prime or first-tier subcontractor under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as

agreed to by the Contracting Officer and the Contractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract). NASA shall not unilaterally require the Contractor to prepare such specifications or statements of work under this contract.

(2) To the extent that the work under this contract requires access to proprietary, business confidential, or financial data of other companies, and/or Government sensitive and nonpublic information, and as long as these data or information remain proprietary or confidential or sensitive and nonpublic, as applicable, the Contractor shall protect these data and/or information from unauthorized use and disclosure and agrees not to use them to compete with other companies.

(End of clause)

### **H.3 TASK ORDERING PROCEDURE (1852.216-80) (OCT 1996)**

(a) Only the Contracting Officer may issue task orders to the Contractor, providing specific authorization or direction to perform work within the scope of the contract and as specified in the schedule. The Contractor may incur costs under this contract in performance of task orders and task order modifications issued in accordance with this clause. No other costs are authorized unless otherwise specified in the contract or expressly authorized by the Contracting Officer.

(b) Prior to issuing a task order, the Contracting Officer shall provide the Contractor with the following data:

(1) A functional description of the work identifying the objectives or results desired from the contemplated task order.

(2) Proposed performance standards to be used as criteria for determining whether the work requirements have been met.

(3) A request for a task plan from the Contractor to include the technical approach, period of performance, appropriate cost information, and any other information required to determine the reasonableness of the Contractor's proposal.

(c) Within fifteen (15) calendar days or less, as determined by the Contracting Officer, after receipt of the Contracting Officer's request, the Contractor shall submit a task plan conforming to the request.

(d) After review and any necessary discussions, the Contracting Officer may issue a task order to the Contractor containing, as a minimum, the following:

(1) Date of the order.

(2) Contract number and order number.

- (3) Functional description of the work identifying the objectives or results desired from the task order, including special instructions or other information necessary for performance of the task.
  - (4) Performance standards, and where appropriate, quality assurance standards.
  - (5) Maximum dollar amount authorized (cost and fee or price). This includes allocation of award fee among award fee periods, if applicable.
  - (6) Any other resources (travel, materials, equipment, facilities, etc.) authorized.
  - (7) Delivery/performance schedule including start and end dates.
  - (8) If contract funding is by individual task order, accounting and appropriation data.
- (e) The Contractor shall provide acknowledgment of receipt to the Contracting Officer within three (3) calendar days after receipt of the task order.
- (f) If time constraints do not permit issuance of a fully defined task order in accordance with the procedures described in paragraphs (a) through (d), a task order which includes a ceiling price may be issued.
- (g) The Contracting Officer may amend tasks in the same manner in which they were issued.
- (h) In the event of a conflict between the requirements of the task order and the Contractor's approved task plan, the task order shall prevail.

(End of clause)

#### **H.4 REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFEROR**

The completed provision 52.204-8, Annual Representations and Certifications, including any amended representation(s) made at paragraph (b) of the provision; and other representations, certifications and other statements contained in Section K completed and submitted as part of the offer are hereby incorporated by reference in this resulting contract.

(End of Clause)

#### **H.5 SMALL DISADVANTAGED BUSINESS PARTICIPATION-CONTRACT TARGETS (OFFEROR FILL IN)**

- (a) FAR 19.1202-4(a) requires that SDB subcontracting targets be incorporated in the Contract.

Targets for this contract are as follows:

\*NAICS Industry



NAICS Industry Subsector	Dollar Target	Percent of Contract Value
Total		

\*North American Industry Classification System (NAICS) Industry Subsectors as determined by the Department of Commerce as being underrepresented in accordance with FAR 19.201(b)

(b) FAR 19.1202-4(b) requires that SDB concerns that are specifically identified by the Offeror be listed in the contract when the identification of such subcontractors was evaluated as part of the subfactor on Small Business Utilization. SDB concerns (subcontractors) specifically identified by the Offeror are as follows:

Name of Concern	Business Size	NAICS Code(s)

The Contractor shall notify the Contracting Officer of any substitutions of the firms listed if the replacement contractor is not an SDB concern.

(c) If the prime Offeror is an SDB the target for the work it intends to perform as the prime

Contractor is as follows:

\*NAICS Industry

<u>Subsectors</u>	<u>Dollars</u>	<u>Percent of Contract Value</u>
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N/A

(End of clause)

## **H.6 IDENTIFICATION OF LIMITED RIGHTS DATA OR RESTRICTED COMPUTER SOFTWARE**

The data required to be provided under this contract includes data that the Contractor may deliver with limited rights or restricted rights in accordance with Alternate II (paragraph (g)(2)) and/or Alternate III (paragraph (g)(3)(i)), to the Rights in Data-General clause of this contract. The deliverable data to which these Alternate(s) apply are as follows: on a task order basis.

All other data required to be delivered under this contract are not subject to Alternates II and III of the Rights in Data-General clause.

(End of clause)

## **H.7 TASK ORDER SOLICITATION AND SELECTION PROCEDURES (LaRC 52.216-97)(APRIL 2008)**

A. Each contractor will be given a fair opportunity to be considered for each order in accordance with FAR 16.505 but is not required to submit a proposal for any individual task order. The costs of preparing proposals for individual task orders under the contract will not be an allowable direct charge to the contract. However, these costs may be an allowable cost to the normal bid and proposal indirect cost pursuant to FAR 31.205-18.

B. The contracting officer (CO) will consider past performance, quality of services and/or deliverables, final proposed cost/price or other factors the contracting officer believes are relevant.

C. For those orders, which are competed among the multiple contract awardees, the CO will provide a solicitation to each contractor and will request a proposal in accordance with H.3, 1852.216-80, Task Ordering Procedure. The solicitation will include a PWS, specifications, or drawings; required delivery date, any special instructions or provisions, and any selection criteria to be used to award the Task Order. The final cost estimate represents the baseline to be used for reporting in Columns 7b and 7d of NASA Form 533M (See Exhibit C). For orders exceeding \$5 million, the Contracting Officer will comply with the enhanced Ordering Procedures of FAR 16.505(b)(1)(iii).

D. Contractors need not be given an opportunity to be considered for a particular order in excess of \$3,000 under multiple Task Order contracts if the CO determines that-

1. The agency need for the supplies or services is so urgent that providing a fair opportunity would result in unacceptable delays;
2. Only one contractor is capable of providing the supplies or services required at the level of quality required because the supplies or services ordered are unique or highly specialized;
3. The order must be issued on a sole-source basis in the interest of economy and efficiency as a logical follow-on to an order already issued under the contract, provided that all contractors were given a fair opportunity to be considered for the original order; or
4. It is necessary to place an order to satisfy a minimum guarantee.

E. Orders may be issued by facsimile or electronic commerce methods.

(End of clause)

## **H.8 ORGANIZATIONAL CONFLICTS OF INTEREST (LaRC 52.227-96) (AUG 2007)**

- (a) Pursuant to FAR 9.504, the Contracting Officer is responsible for identifying and evaluating potential Organizational Conflicts of Interest (OCI) early in the acquisition process and either avoiding, neutralizing, or mitigating such conflicts before contract award.
- (b) In general during the performance of this contract, the Contractor may encounter conflicts when required to provide systems engineering and technical direction, prepare specifications or work statements, provide evaluation services, and/or obtain access to proprietary information as described in FAR 9.505. More specifically, the Contracting Officer has determined that during performance of this contract, the Contractor may
  - (1) have access to proprietary information or data of other contractors and/or Government sensitive, nonpublic information or data, which information or data may provide the Contractor with an unfair competitive advantage with regard to a competitive acquisition;
  - (2) evaluate or assess the work product of the Contractor or of the Contractor's competitors which were developed under other contracts; or
  - (3) prepare, or assist in preparing, specifications or work statements to be used in competitive acquisitions. [For the purpose of this clause, the term contractor includes any division, separate company, or subsidiary that is wholly-owned by the parent corporation, and includes any of the prime Contractors teammates and/or Subcontractor(s).] The existence of these conflicting roles might bias the Contractor's judgment.
- (c) Contractor's response to Task Orders: Within two working days of receipt of a Task Order request causing such a conflict to arise, the Contractor shall notify the Contracting Officer and provide a report of a potential conflict detailing:
  - (1) The nature of the conflict
  - (2) Plan for avoiding, neutralizing or mitigating the conflict
  - (3) The benefits and risks associated with acceptance of the plan
- (d) Government Response to a Report of a Potential Conflict: The Contracting Officer shall review the report and determine which of the following approaches is in the best interest of the

Government and shall so advise the Contractor:

- (1) The Contractor shall perform consistent with the Task Order;
  - (2) The Contractor shall not perform the Task Order;
  - (3) The Task Order shall be cancelled or modified to remove the identified conflict and/or work identified in the Task Order;
  - (4) The Task Order may be performed by other Government personnel, and/or the work may be obtained by the Government from another source not possessing a similar conflict of interest; or
  - (5) The Contractor may identify a Subcontractor who can provide services consistent with the Task Order. The Contractor may enter into a subcontract and retain all contractual responsibilities except that the Subcontractor technical reports shall be delivered directly to the Contracting Officer's Technical Representative and the Contracting Officer. This subcontract will not obviate the Contractor's responsibility for acceptable technical performance of the Task Order.
- (e) Additional requirements:
- (1) Any limitations on future contracting resulting from the Contractor's or its Subcontractor's preparation of specifications, performance work statements, or access to proprietary, business confidential, or financial data of another company are identified in Section H.2.
  - (2) The Contractor shall include this clause in all subcontract(s) regardless of tier.

(End of clause)

#### **H.9 Reserved**

#### **H.10 ISO 9001 CERTIFICATION/REGISTRATION REQUIREMENTS QUALITY MANAGEMENT SYSTEM (CERTIFIED AT AWARD)(LaRC 52.246-99)(NOV 2002)**

The Contractor's quality system shall be Certified/Registered to the current ISO 9001 standard, Quality Management Systems Requirements.

The Contractor's quality system shall remain in Certified/Registered to the ISO 9001 standard during the term of the contract. The Government reserves the rights to audit the Contractor's quality system at any time.

"Certified/Registered" as used in this clause means that the contractor has defined, documented, and will continually implement during the term of the contract management-approved methods of operation that have been audited by a 3<sup>rd</sup> party ISO 9001 Registrar and found to meet the requirements given in the above-cited International Standard.

(End of clause)

#### **H.11 Reserved**

#### **H.12 AS9100 QUALITY MANAGEMENT SYSTEM CERTIFICATION/REGISTRATION REQUIREMENTS QUALITY MANAGEMENT SYSTEM (CERTIFIED AT AWARD)(LARC 52.246-103)(APRIL 2008)**

The Contractor's quality system shall be certified/registered to the current AS9100 standard, Quality Management Systems Requirements.

The Contractor's quality system shall remain in certified/registered to the AS9100 standard during the term of the contract. The Government reserves the rights to audit the Contractor's quality system at any time.

"Certified/Registered" as used in this clause means that the Contractor has defined, documented, and will continually implement during the term of the contract management-approved methods of operation that have been audited by a 3<sup>rd</sup> party AS9100 Registrar and found to meet the requirements given in the above-cited Aerospace Standard.

(End of clause)

### **H.13 OCI AVOIDANCE PLAN**

Clause(s) In according with Paragraph (d) of I.10 (NFS 1852.237-72 Access to Sensitive Information), Contractors shall submit an OCI Avoidance Plan for review and approval no later than ten (10) days after notification of award. Contractors shall remain ineligible for award of individual task orders until the OCI Avoidance Plan is approved by the Contracting Officer. At a minimum, the OCI Avoidance Plan shall address the following:

(A) the requirements set forth in H.8 (LaRC 52.227-96 Organizational Conflict of Interest), H.2 (NFS 1852.209-71 Limitation of Future Contracting) and I.10 (NFS 1852.237-72 Access to Sensitive Information);

(B) the Contractor's process for identifying OCIs, including the Contractor's coordination with each of its parent, subsidiaries, affiliates, office locations, divisions and/or other similar entities (collectively, the "Business Units") to determine whether OCIs currently exist;

(C) the approach for maintaining communication with each Business Unit during the performance of a task order to identify potential OCIs arising during such performance period;

(D) the approach to training and refresher training for its employees,

(E) once identified, the methods the contractor will utilize to mitigate the various types of OCIs;

(F) the Contractor's approach for identifying, mitigating and/or avoiding personal COIs for employees performing evaluation or assessment work, and

(G) the approach for ensuring the processes and procedures included herein will be applied to each of its subcontractors and/or consultants (including their respective Business Units).

(End of clause)

[END OF SECTION]

**PART II – CONTRACT CLAUSES****SECTION I - CONTRACT CLAUSES****I.1 CLAUSES INCORPORATED BY REFERENCE - SECTION I**

Clauses at the beginning of this Section are incorporated by reference, with the same force and effect as if they were given in full text. Clauses incorporated by reference which require a fill-in by the Government include the text of the affected paragraph(s) only. This does not limit the clause to the affected paragraph(s). The Contractor is responsible for understanding and complying with the entire clause. The full text of the clause is available at the addresses contained in clause 52.252-2, Clauses Incorporated by Reference, of this contract.

(End of clause)

I. Federal Acquisition Regulation (48 CFR CHAPTER 1)

<b>CLAUSE NUMBER</b>	<b>CLAUSE TITLE</b>
<b>52.202-1</b>	<b>DEFINITIONS (JUL 2004)</b>
<b>52.203-3</b>	<b>GRATUITIES (APR 1984)</b>
<b>52.203-5</b>	<b>COVENANT AGAINST CONTINGENT FEES (APR 1984)</b>
<b>52.203-6</b>	<b>RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (SEP 2006)</b>
<b>52.203-7</b>	<b>ANTI-KICKBACK PROCEDURES (JUL 1995)</b>
<b>52.203-8</b>	<b>CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)</b>
<b>52.203-10</b>	<b>PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)</b>
<b>52.203-12</b>	<b>LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (SEP 2007)</b>
<b>52.203-13</b>	<b>CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT (DEC 2008)</b>
<b>52.203-14</b>	<b>DISPLAY OF HOTLINE POSTER(S) (DEC 2007)</b> Fill In: NASA LaRC Office of Inspector General, (757) 864-3262
<b>52.204-2</b>	<b>SECURITY REQUIREMENTS (AUG 1996)</b>
<b>52.204-4</b>	<b>PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)</b>
<b>52.204-7</b>	<b>CENTRAL CONTRACTOR REGISTRATION (APR 2008)</b>
<b>52.209-6</b>	<b>PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (SEP 2006)</b>
<b>52.215-2</b>	<b>AUDIT AND RECORDS - NEGOTIATION (JUN 1999)</b>
<b>52.215-8</b>	<b>ORDER OF PRECEDENCE - UNIFORM CONTRACT FORMAT (OCT 1997)</b>
<b>52.215-11</b>	<b>PRICE REDUCTION FOR DEFECTIVE COST OR PRICING</b>

	<b>DATA - MODIFICATIONS (OCT 1997)</b>
<b>52.215-12</b>	<b>SUBCONTRACTOR COST OR PRICING DATA (OCT 1997)</b>
<b>52.215-15</b>	<b>PENSION ADJUSTMENTS AND ASSET REVERSIONS (OCT 2004)</b>
<b>52.215-18</b>	<b>REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (JUL 2005)</b>
<b>52.215-19</b>	<b>NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)</b>
<b>52.215-21</b>	<b>REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA - MODIFICATIONS (OCT 1997) - ALTERNATE IV (OCT 1997)</b> <b>Insert (b) Provide information described below:</b> <b>L.9</b>
<b>52.216-7</b>	<b>ALLOWABLE COST AND PAYMENT (DEC 2002)</b> Fill In: (3) The designated payment office will make interim payments for contract financing on the <u>30<sup>th</sup></u> day after the designated billing office receives a proper payment request.
<b>52.216-8</b>	<b>FIXED FEE (MAR 1997)</b>
<b>52.216-18</b>	<b>ORDERING (OCT 1995)</b> Fill in: (a) contract effective date through the end of the contract period of performance.
<b>52.216-19</b>	<b>ORDER LIMITATIONS (OCT 1995)</b> Fill in: (d) 3 calendar days
<b>52.216-22</b>	<b>INDEFINITE QUANTITY (OCT 1995)</b>
<b>52.217-8</b>	<b>OPTION TO EXTEND SERVICES (NOV 1999)</b>
<b>52.219-8</b>	<b>UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2004)</b>
<b>52.219-9</b>	<b>SMALL BUSINESS SUBCONTRACTING PLAN (APR 2008) - ALTERNATE II (OCT 2001)</b>
<b>52.219-16</b>	<b>LIQUIDATED DAMAGES - SUBCONTRACTING PLAN (JAN 1999)</b>
<b>52.222-1</b>	<b>NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)</b>
<b>52.222-2</b>	<b>PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)</b> Fill in: "zero" In paragraph (a)
<b>52.222-3</b>	<b>CONVICT LABOR (JUN 2003)</b>
<b>52.222-21</b>	<b>PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)</b>
<b>52.222-26</b>	<b>EQUAL OPPORTUNITY (MAR 2007)</b>
<b>52.222-35</b>	<b>EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (SEP 2006)</b>
<b>52.222-36</b>	<b>AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)</b>
<b>52.222-37</b>	<b>EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (SEP 2006)</b>
<b>52.222-50</b>	<b>COMBATING TRAFFICKING IN PERSONS (FEB 2009)</b>
<b>52.223-6</b>	<b>DRUG-FREE WORKPLACE (MAY 2001)</b>



52.223-14	<b>TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)</b>
52.223-15	<b>ENERGY EFFICIENCY IN ENERGY-CONSUMING PRODUCTS (DEC 2007)</b>
52.225-13	<b>RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUN 2008)</b>
52.227-1	<b>AUTHORIZATION AND CONSENT (DEC 2007) - ALTERNATE I (APR 1984)</b>
52.227-2	<b>NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (DEC 2007)</b>
52.227-10	<b>FILING OF PATENT APPLICATIONS - CLASSIFIED SUBJECT MATTER (DEC 2007)</b>
52.227-14	<b>RIGHTS IN DATA—GENERAL ALTERNATE II (DEC 2007) ALTERNATE III (DEC 2007) AS MODIFIED BY 1852.227-14 NASA FAR SUPPLEMENT (added to subparagraph 4 of paragraph (d))</b>
52.227-16	<b>ADDITIONAL DATA REQUIREMENTS (JUN 1987)</b>
52.228-7	<b>INSURANCE - LIABILITY TO THIRD PERSONS (MAR 1996)</b>
52.230-2	<b>COST ACCOUNTING STANDARDS (OCT 2008)</b>
52.230-6	<b>ADMINISTRATION OF COST ACCOUNTING STANDARDS (MAR 2008)</b>
52.232-9	<b>LIMITATION ON WITHHOLDING OF PAYMENTS (APR 1984)</b>
52.232-17	<b>INTEREST (OCT 2008)</b>
52.232-22	<b>LIMITATION OF FUNDS (APR 1984)</b>
52.232-23	<b>ASSIGNMENT OF CLAIMS (JAN 1986)</b>
52.232-25	<b>PROMPT PAYMENT (OCT 2008)</b>
52.232-34	<b>PAYMENT BY ELECTRONIC FUNDS TRANSFER - OTHER THAN CENTRAL CONTRACTOR REGISTRATION (MAY 1999)</b> Fill in: (b)(1) no later than 15 days prior to submission of the first request for payment
52.233-1	<b>DISPUTES (JUL 2002) - ALTERNATE I (DEC 1991)</b>
52.233-3	<b>PROTEST AFTER AWARD (AUG 1996) - ALTERNATE I (JUN 1985)</b>
52.233-4	<b>APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)</b>
52.239-1	<b>PRIVACY OR SECURITY SAFEGUARDS (AUG 1996)</b>
52.242-1	<b>NOTICE OF INTENT TO DISALLOW COSTS (APR 1984)</b>
52.242-3	<b>PENALTIES FOR UNALLOWABLE COSTS (MAY 2001)</b>
52.242-4	<b>CERTIFICATION OF FINAL INDIRECT COSTS (JAN 1997)</b>
52.242-13	<b>BANKRUPTCY. (JUL 1995)</b>
52.243-2	<b>CHANGES - COST-REIMBURSEMENT. (AUG 1987) - ALTERNATE V (APR 1984) fill in: 60 days</b>
52.244-2	<b>SUBCONTRACTS (JUN 2007) fill in: (d) TBD (j) TBD</b>
52.244-5	<b>COMPETITION IN SUBCONTRACTING (DEC 1996)</b>

<b>52.244-6</b>	<b>SUBCONTRACTS FOR COMMERCIAL ITEMS (MAR 2009)</b>
<b>52.245-1</b>	<b>GOVERNMENT PROPERTY (JUN 2007)</b>
<b>52.245-9</b>	<b>USE AND CHARGES (JUN 2007)</b>
<b>52.246-23</b>	<b>LIMITATION OF LIABILITY (FEB 1997)</b>
<b>52.246-25</b>	<b>LIMITATION OF LIABILITY - SERVICES (FEB 1997)</b>
<b>52.249-6</b>	<b>TERMINATION (COST-REIMBURSEMENT) (MAY 2004)</b>
<b>52.249-14</b>	<b>EXCUSABLE DELAYS (APR 1984)</b>
<b>52.253-1</b>	<b>COMPUTER GENERATED FORMS (JAN 1991)</b>

## II. NASA FAR Supplement (48 CFR CHAPTER 18)

<b>CLAUSE NUMBER</b>	<b>CLAUSE TITLE</b>
<b>1852.203-70</b>	<b>DISPLAY OF INSPECTOR GENERAL HOTLINE POSTERS (JUN 2001)</b> Paragraph (b)(3) fill in: NASA LaRC Office of Inspector General (757) 864-3262
<b>1852.216-89</b>	<b>ASSIGNMENT AND RELEASE FORMS (JUL 1997)</b>
<b>1852.219-74</b>	<b>USE OF RURAL AREA SMALL BUSINESSES (SEP 1990)</b>
<b>1852.219-75</b>	<b>SMALL BUSINESS SUBCONTRACTING REPORTING (MAY 1999)</b>
<b>1852.219-76</b>	<b>NASA 8 PERCENT GOAL (JUL 1997)</b>
<b>1852.223-74</b>	<b>DRUG-AND ALCOHOL-FREE WORKFORCE (MAR 1996)</b>
<b>1852.228-75</b>	<b>MINIMUM INSURANCE COVERAGE (OCT 1988)</b>
<b>1852.235-70</b>	<b>CENTER FOR AEROSPACE INFORMATION (DEC 2006)</b>
<b>1852.243-71</b>	<b>SHARED SAVINGS (MAR 1997)</b>

### I.2 RESERVED.

### I.3 RESERVED.

### I.4 SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM-DISADVANTAGED STATUS AND REPORTING (52.219-25)(APR 2008)

#### (a) **Disadvantaged status for joint venture partners, team members, and subcontractors.**

This clause addresses disadvantaged status for joint venture partners, teaming arrangement members, and subcontractors and is applicable if this contract contains small disadvantaged business (SDB) participation targets. The Contractor shall obtain representations of small disadvantaged status from joint venture partners, teaming arrangement members, and subcontractors through use of a provision substantially the same as paragraph (b)(1)(i) of the provision at FAR 52.219-22, Small Disadvantaged Business Status. The Contractor shall confirm that a joint venture partner, team member, or subcontractor representing itself as a small disadvantaged business concern is a small disadvantaged business concern certified by the Small Business Administration by using the Central Contractor Registration database or by contacting the SBA's Office of Small Disadvantaged Business Certification and Eligibility.

(b) **Reporting requirement.** If this contract contains SDB participation targets, the Contractor shall report on the participation of SDB concerns at contract completion, or as otherwise

provided in this contract. Reporting may be on Optional Form 312, Small Disadvantaged Business Participation Report, in the Contractor's own format providing the same information, or accomplished through using the Electronic Subcontracting Reporting System's Small Disadvantaged Business Participation Report. This report is required for each contract containing SDB participation targets. If this contract contains an individual Small Business Subcontracting Plan, reports shall be submitted with the final Individual Subcontract Report at the completion of the contract.

(End of clause)

#### **I.5 CLAUSES INCORPORATED BY REFERENCE (52.252-2)(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):

Federal Acquisition Regulation (FAR) clauses:

<http://www.acqnet.gov/far/>

NASA FAR Supplement (NFS) clauses:

<http://www.hq.nasa.gov/office/procurement/regs/nfstoc.htm>

(End of clause)

#### **I.6 AUTHORIZED DEVIATIONS IN CLAUSES (52.252-6)(APR 1984)**

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the date of the clause.

(b) The use in this solicitation or contract of any NASA FAR Supplement (48 CFR 18) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the name of the regulation.

(End of clause)

#### **I.7 SECURITY CLASSIFICATION REQUIREMENTS (1852.204-75)(SEP 1989)**

Performance under this contract will involve access to and/or generation of classified information, work in a security area, or both, up to the level of SECRET. See Federal Acquisition Regulation clause 52.204-2 in this contract and DD Form 254, Contract Security Classification Specification, Exhibit B.

(End of clause)

**I.8 SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (1852.204-76)(MAY 2007)**

(a) The Contractor shall be responsible for information and information technology (IT) security when -

(1) The Contractor or its subcontractors must obtain physical or electronic (i.e., authentication level 2 and above as defined in National Institute of Standards and Technology (NIST) Special Publication (SP) 800-63, Electronic Authentication Guideline) access to NASA's computer systems, networks, or IT infrastructure; or

(2) Information categorized as low, moderate, or high by the Federal Information Processing Standards (FIPS) 199, Standards for Security Categorization of Federal Information and Information Systems is stored, generated, processed, or exchanged by NASA or on behalf of NASA by a contractor or subcontractor, regardless of whether the information resides on a NASA or a contractor/subcontractor's information system.

(b) IT Security Requirements.

(1) Within 30 days after contract award, a Contractor shall submit to the Contracting Officer for NASA approval an IT Security Plan, Risk Assessment, and FIPS 199, Standards for Security Categorization of Federal Information and Information Systems, Assessment. These plans and assessments, including annual updates shall be incorporated into the contract as compliance documents.

(i) The IT system security plan shall be prepared consistent, in form and content, with NIST SP 800-18, Guide for Developing Security Plans for Federal Information Systems, and any additions/augmentations described in NASA Procedural Requirements (NPR) 2810, Security of Information Technology. The security plan shall identify and document appropriate IT security controls consistent with the sensitivity of the information and the requirements of Federal Information Processing Standards (FIPS) 200, Recommended Security Controls for Federal Information Systems. The plan shall be reviewed and updated in accordance with NIST SP 800-26, Security Self-Assessment Guide for Information Technology Systems, and FIPS 200, on a yearly basis.

(ii) The risk assessment shall be prepared consistent, in form and content, with NIST SP 800-30, Risk Management Guide for Information Technology Systems, and any additions/augmentations described in NPR 2810. The risk assessment shall be updated on a yearly basis.

(iii) The FIPS 199 assessment shall identify all information types as well as the "high water mark," as defined in FIPS 199, of the processed, stored, or transmitted information necessary to fulfill the contractual requirements.

(2) The Contractor shall produce contingency plans consistent, in form and content, with

NIST SP 800-34, Contingency Planning Guide for Information Technology Systems, and any additions/augmentations described in NPR 2810. The Contractor shall perform yearly "Classroom Exercises." "Functional Exercises," shall be coordinated with the Center CIOs and be conducted once every three years, with the first conducted within the first two years of contract award. These exercises are defined and described in NIST SP 800-34.

(3) The Contractor shall ensure coordination of its incident response team with the NASA Incident Response Center (NASIRC) and the NASA Security Operations Center, ensuring that incidents are reported consistent with NIST SP 800-61, Computer Security Incident Reporting Guide, and the United States Computer Emergency Readiness Team's (US-CERT) Concept of Operations for reporting security incidents. Specifically, any confirmed incident of a system containing NASA data or controlling NASA assets shall be reported to NASIRC within one hour that results in unauthorized access, loss or modification of NASA data, or denial of service affecting the availability of NASA data.

(4) The Contractor shall ensure that its employees, in performance of the contract, receive annual IT security training in NASA IT Security policies, procedures, computer ethics, and best practices in accordance with NPR 2810 requirements. The Contractor may use web-based training available from NASA to meet this requirement.

(5) The Contractor shall provide NASA, including the NASA Office of Inspector General, access to the Contractor's and subcontractors' facilities, installations, operations, documentation, databases, and personnel used in performance of the contract. Access shall be provided to the extent required to carry out IT security inspection, investigation, and/or audits to safeguard against threats and hazards to the integrity, availability, and confidentiality of NASA information or to the function of computer systems operated on behalf of NASA, and to preserve evidence of computer crime. To facilitate mandatory reviews, the Contractor shall ensure appropriate compartmentalization of NASA information, stored and/or processed, either by information systems in direct support of the contract or that are incidental to the contract.

(6) The Contractor shall ensure that system administrators who perform tasks that have a material impact on IT security and operations demonstrate knowledge appropriate to those tasks. Knowledge is demonstrated through the NASA System Administrator Security Certification Program. A system administrator is one who provides IT services (including network services, file storage, and/or web services) to someone other than themselves and takes or assumes the responsibility for the security and administrative controls of that service. Within 30 days after contract award, the Contractor shall provide to the Contracting Officer a list of all system administrator positions and personnel filling those positions, along with a schedule that ensures certification of all personnel within 90 days after contract award. Additionally, the Contractor should report all personnel changes which impact system administrator positions within 5 days of the personnel change and ensure these individuals obtain System Administrator certification within 90 days after the change.

(7) The Contractor shall ensure that NASA's Sensitive But Unclassified (SBU) information as defined in NPR 1600.1, NASA Security Program Procedural Requirements, which includes privacy information, is encrypted in storage and transmission.

(8) When the Contractor is located at a NASA Center or installation or is using NASA IP address space, the Contractor shall -

- (i) Submit requests for non-NASA provided external Internet connections to the Contracting Officer for approval by the Network Security Configuration Control Board (NSCCB);

- (ii) Comply with the NASA CIO metrics including patch management, operating systems and application configuration guidelines, vulnerability scanning, incident reporting, system administrator certification, and security training; and

- (iii) Utilize the NASA Public Key Infrastructure (PKI) for all encrypted communication or non-repudiation requirements within NASA when secure email capability is required.

(c) Physical and Logical Access Requirements.

(1) Contractor personnel requiring access to IT systems operated by the Contractor for NASA or interconnected to a NASA network shall be screened at an appropriate level in accordance with NPR 2810 and Chapter 4, NPR 1600.1, NASA Security Program Procedural Requirements. NASA shall provide screening, appropriate to the highest risk level, of the IT systems and information accessed, using, as a minimum, National Agency Check with Inquiries (NACI). The Contractor shall submit the required forms to the NASA Center Chief of Security (CCS) within fourteen (14) days after contract award or assignment of an individual to a position requiring screening. The forms may be obtained from the CCS. At the option of NASA, interim access may be granted pending completion of the required investigation and final access determination. For Contractors who will reside on a NASA Center or installation, the security screening required for all required access (e.g., installation, facility, IT, information, etc.) is consolidated to ensure only one investigation is conducted based on the highest risk level. Contractors not residing on a NASA installation will be screened based on their IT access risk level determination only. See NPR 1600.1, Chapter 4.

(2) Guidance for selecting the appropriate level of screening is based on the risk of adverse impact to NASA missions. NASA defines three levels of risk for which screening is required (IT-1 has the highest level of risk).

- (i) IT-1 - Individuals having privileged access or limited privileged access to systems whose misuse can cause very serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of spacecraft, satellites or aircraft.

(ii) IT-2 - Individuals having privileged access or limited privileged access to systems whose misuse can cause serious adverse impact to NASA missions. These systems include, for example, those that can transmit commands directly modifying the behavior of payloads on spacecraft, satellites or aircraft; and those that contain the primary copy of "level 1" information whose cost to replace exceeds one million dollars.

(iii) IT-3 - Individuals having privileged access or limited privileged access to systems whose misuse can cause significant adverse impact to NASA missions. These systems include, for example, those that interconnect with a NASA network in a way that exceeds access by the general public, such as bypassing firewalls; and systems operated by the Contractor for NASA whose function or information has substantial cost to replace, even if these systems are not interconnected with a NASA network.

(3) Screening for individuals shall employ forms appropriate for the level of risk as established in Chapter 4, NPR 1600.1.

(4) The Contractor may conduct its own screening of individuals requiring privileged access or limited privileged access provided the Contractor can demonstrate to the Contracting Officer that the procedures used by the Contractor are equivalent to NASA's personnel screening procedures for the risk level assigned for the IT position.

(5) Subject to approval of the Contracting Officer, the Contractor may forgo screening of Contractor personnel for those individuals who have proof of a -

(i) Current or recent national security clearances (within last three years);

(ii) Screening conducted by NASA within the last three years that meets or exceeds the screening requirements of the IT position; or

(iii) Screening conducted by the Contractor, within the last three years, that is equivalent to the NASA personnel screening procedures as approved by the Contracting Officer and concurred on by the CCS.

(d) The Contracting Officer may waive the requirements of paragraphs (b) and (c) (1) through (c) (3) upon request of the Contractor. The Contractor shall provide all relevant information requested by the Contracting Officer to support the waiver request.

(e) The Contractor shall contact the Contracting Officer for any documents, information, or forms necessary to comply with the requirements of this clause.

(f) At the completion of the contract, the contractor shall return all NASA information and IT resources provided to the contractor during the performance of the contract and certify that all NASA information has been purged from contractor-owned systems used in the performance of

the contract.

(g) The Contractor shall insert this clause, including this paragraph (g), in all subcontracts:

(1) Have physical or electronic access to NASA's computer systems, networks, or IT infrastructure; or

(2) Use information systems to generate, store, process, or exchange data with NASA or on behalf of NASA, regardless of whether the data resides on a NASA or a contractor's information system.

(End of clause)

#### **I.9 OMBUDSMAN (OCT 2003) -- ALTERNATE I (1852.215-84)(JUN 2000)**

(a) An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and contractors during the preaward and postaward phases of this acquisition. When requested, the ombudsman will maintain strict confidentiality as to the source of the concern. The existence of the ombudsman is not to diminish the authority of the contracting officer, the Source Evaluation Board, or the selection official. Further, the ombudsman does not participate in the evaluation of proposals, the source selection process, or the adjudication of formal contract disputes. Therefore, before consulting with an ombudsman, interested parties must first address their concerns, issues, disagreements, and/or recommendations to the contracting officer for resolution.

(b) If resolution cannot be made by the contracting officer, interested parties may contact the installation ombudsman, Cynthia C. Lee, direct inquiries to the Office of Procurement Deputy Director, NASA Langley Research Center, Mail Stop 134, Hampton, VA 23681-2199; phone (757) 864-2426; facsimile (757) 864-854. Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the NASA ombudsman, the Director of the Contract Management Division, at 202-358-0445, facsimile 202-358-3083, e-mail [james.a.balinskas@nasa.gov](mailto:james.a.balinskas@nasa.gov). Please do not contact the ombudsman to request copies of the solicitation, verify offer due date, or clarify technical requirements. Such inquiries shall be directed to the Contracting Officer or as specified elsewhere in this document.

(c) If this is a task or delivery order contract, the ombudsman shall review complaints from contractors and ensure they are afforded a fair opportunity to be considered, consistent with the procedures of the contract.

(End of clause)

#### **I.10 ACCESS TO SENSITIVE INFORMATION (1852.237-72)(JUN 2005)**

(a) As used in this clause, "sensitive information" refers to information that a contractor has developed at private expense, or that the Government has generated that qualifies for an exception to the Freedom of Information Act, which is not currently in the public domain, and



which may embody trade secrets or commercial or financial information, and which may be sensitive or privileged.

(b) To assist NASA in accomplishing management activities and administrative functions, the Contractor shall provide the services specified elsewhere in this contract.

(c) If performing this contract entails access to sensitive information, as defined above, the Contractor agrees to--

(1) Utilize any sensitive information coming into its possession only for the purposes of performing the services specified in this contract, and not to improve its own competitive position in a future procurement.

(2) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.

(3) Allow access to sensitive information only to those employees that need it to perform services under this contract.

(4) Preclude access and disclosure of sensitive information to persons and entities outside of the Contractor's organization.

(5) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in this contract and to safeguard it from unauthorized use and disclosure.

(6) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.

(7) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.

(d) The Contractor will comply with all procedures and obligations specified in its Organizational Conflicts of Interest Avoidance Plan, which this contract incorporates as a compliance document.

(e) The nature of the work on this contract may subject the Contractor and its employees to a variety of laws and regulations relating to ethics, conflicts of interest, corruption, and other criminal or civil matters relating to the award and administration of government contracts. Recognizing that this contract establishes a high standard of accountability and trust, the Government will carefully review the Contractor's performance in relation to the mandates and restrictions found in these laws and regulations. Unauthorized uses or disclosures of sensitive information may result in termination of this contract for default, or in debarment of the Contractor for serious misconduct affecting present responsibility as a government contractor.

(f) The Contractor shall include the substance of this clause, including this paragraph (f), suitably modified to reflect the relationship of the parties, in all subcontracts that may involve access to sensitive information

(End of clause)

#### **I.11 RIGHTS IN DATA – GENERAL (1852.227-14)**

As prescribed in 1827.409(a), add the following subparagraph (3) to paragraph (d) of the basic clause at FAR 52.227-14:

(3)(i) The Contractor agrees not to establish claim to copyright, publish or release to others any computer software first produced in the performance of this contract without the Contracting Officer's prior written permission.

(ii) If the Government desires to obtain copyright in computer software first produced in the performance of this contract and permission has not been granted as set forth in paragraph (d)(3)(i) of this clause, the Contracting Officer may direct the contractor to assert, or authorize the assertion of, claim to copyright in such data and to assign, or obtain the assignment of, such copyright to the Government or its designated assignee.

(iii) Whenever the word "establish" is used in this clause, with reference to a claim to copyright, it shall be construed to mean "assert".

(End of addition)

#### **I.12 RELEASE OF SENSITIVE INFORMATION (1852.237-73)(JUN 2005)**

(a) As used in this clause, "Sensitive information" refers to information, not currently in the public domain, that the Contractor has developed at private expense, that may embody trade secrets or commercial or financial information, and that may be sensitive or privileged.

(b) In accomplishing management activities and administrative functions, NASA relies heavily on the support of various service providers. To support NASA activities and functions, these service providers, as well as their subcontractors and their individual employees, may need access to sensitive information submitted by the Contractor under this contract. By submitting this proposal or performing this contract, the Contractor agrees that NASA may release to its service providers, their subcontractors, and their individual employees, sensitive information submitted during the course of this procurement, subject to the enumerated protections mandated by the clause at 1852.237-72, Access to Sensitive Information.

(c) (1) The Contractor shall identify any sensitive information submitted in support of this proposal or in performing this contract. For purposes of identifying sensitive information, the Contractor may, in addition to any other notice or legend otherwise required, use a notice similar to the following:

Mark the title page with the following legend:

This proposal or document includes sensitive information that NASA shall not disclose outside the Agency and its service providers that support management activities and administrative functions. To gain access to this sensitive information, a service provider's contract must contain the clause at 1852.237-72, Access to Sensitive Information. Consistent with this clause, the service provider shall not duplicate, use, or disclose the information in whole or in part for any purpose other than to perform the services specified in its contract. This restriction does not limit the Government's right to use this information if it is obtained from another source without restriction. The information subject to this restriction is contained in pages 1-69 of the 9NP52\_SMAAART Technical Proposal. Mark each page of sensitive information the Contractor wishes to restrict with the following legend:

Use or disclosure of sensitive information contained on this page is subject to the restriction on the title page of this proposal or document.

(2) The Contracting Officer shall evaluate the facts supporting any claim that particular information is "sensitive." This evaluation shall consider the time and resources necessary to protect the information in accordance with the detailed safeguards mandated by the clause at 1852.237-72, Access to Sensitive Information. However, unless the Contracting Officer decides, with the advice of Center counsel, that reasonable grounds exist to challenge the Contractor's claim that particular information is sensitive, NASA and its service providers and their employees shall comply with all of the safeguards contained in paragraph (d) of this clause.

(d) To receive access to sensitive information needed to assist NASA in accomplishing management activities and administrative functions, the service provider must be operating under a contract that contains the clause at 1852.237-72, Access to Sensitive Information. This clause obligates the service provider to do the following:

- (1) Comply with all specified procedures and obligations, including the Organizational Conflicts of Interest Avoidance Plan, which the contract has incorporated as a compliance document.
- (2) Utilize any sensitive information coming into its possession only for the purpose of performing the services specified in its contract.
- (3) Safeguard sensitive information coming into its possession from unauthorized use and disclosure.
- (4) Allow access to sensitive information only to those employees that need it to perform services under its contract.
- (5) Preclude access and disclosure of sensitive information to persons and entities outside of the service provider's organization.
- (6) Train employees who may require access to sensitive information about their obligations to utilize it only to perform the services specified in its contract and to

safeguard it from unauthorized use and disclosure.

(7) Obtain a written affirmation from each employee that he/she has received and will comply with training on the authorized uses and mandatory protections of sensitive information needed in performing this contract.

(8) Administer a monitoring process to ensure that employees comply with all reasonable security procedures, report any breaches to the Contracting Officer, and implement any necessary corrective actions.

(e) When the service provider will have primary responsibility for operating an information technology system for NASA that contains sensitive information, the service provider's contract shall include the clause at 1852.204-76, Security Requirements for Unclassified Information Technology Resources. The Security Requirements clause requires the service provider to implement an Information Technology Security Plan to protect information processed, stored, or transmitted from unauthorized access, alteration, disclosure, or use. Service provider personnel requiring privileged access or limited privileged access to these information technology systems are subject to screening using the standard National Agency Check (NAC) forms appropriate to the level of risk for adverse impact to NASA missions. The Contracting Officer may allow the service provider to conduct its own screening, provided the service provider employs substantially equivalent screening procedures.

(f) This clause does not affect NASA's responsibilities under the Freedom of Information Act.

(g) The Contractor shall insert this clause, including this paragraph (g), suitably modified to reflect the relationship of the parties, in all subcontracts that may require the furnishing of sensitive information.

(End of clause)

[END OF SECTION]

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

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The following documents are attached hereto and made a part of this contract:

<b>Exhibit</b>	<b>Description</b>
<b>Exhibit A</b>	Performance Work Statement (PWS)
<b>Exhibit B</b>	DD Form 254, Department of Defense Contract Security Classification Specification
<b>Exhibit C</b>	Contract Documentation Requirements
<b>Exhibit D</b>	Organizational Conflicts of Interest (OCI) Avoidance Plan
<b>Exhibit E</b>	Quality Plan
<b>Exhibit F</b>	<i>Reserved</i>
<b>Exhibit G</b>	Information Technology (IT) Security Implementation Plan
<b>Exhibit H</b>	Subcontracting Plan
<b>Exhibit I</b>	Small Business Subcontracting Plan Goals
<b>Exhibit J</b>	Direct Labor Classification Descriptions
<b>Exhibit K</b>	List of Acronyms
<b>Exhibit L</b>	Schedule of Labor Rates

**EXHIBIT A - PERFORMANCE WORK STATEMENT**

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**STRUCTURES, MATERIALS, AERODYNAMICS, AEROTHERMODYNAMICS,  
and ACOUSTICS RESEARCH and TECHNOLOGY****1.0 SCOPE AND OBJECTIVES**

This contract is for Structures, Materials, Aerodynamics, Aerothermodynamics, and Acoustics Research and Technology for aerospace vehicles. The contractor shall furnish all personnel, facilities, equipment, material, supplies, and services, except as may be expressly set forth in the Contract task orders as Government furnished, and otherwise do all things necessary to, or incident to, perform and provide the work efforts described in this Exhibit A. The contractor shall perform task orders that are issued by the Langley Research Center Contracting Officer. This contract may be used to support all NASA Centers that require work within the scope of this Exhibit A.

**2.0 Structures and Materials Research & Technology for Aerospace Vehicles****2.1 Structures and Materials**

Task orders will be written to support research and development in materials and structures technology related to aerospace vehicles, with emphasis in the research areas of structural mechanics and concepts, durability, damage tolerance, and reliability, structural dynamics, aeroelasticity, advanced materials and processing, and nondestructive evaluation sciences. Research and development in structures and materials technology may include the use of systems analysis and trade studies to determine the potential benefits of different concepts including the potential benefits of utilizing various technologies on these different configurations.

**2.1.1 Durability, Damage Tolerance, and Reliability**

The contractor shall investigate stability, strength, damage tolerance, and structural integrity of aircraft and spacecraft structures, and tailor structures made from composite, metallic or hybrid metallic-composite materials. The contractor shall focus on the identification of structural deformations and failure modes, development of verified failure analysis, development of structurally efficient composite, metallic or hybrid metallic-composite structural concepts, prediction of linear and nonlinear structural response phenomena of undamaged and damaged structures subjected to mechanical and pressure loads. The contractor shall develop diagnostic and prognostic algorithms for structural health management. The contractor shall also develop and validate new static and dynamic test techniques including combined loads. The contractor shall conduct fundamental and applied research to develop the mechanics characterization of advanced materials for airframe and spacecraft structural applications in the form of mechanics-based mathematical models that provide the material descriptions required to predict the deformation, strength, and life of advanced materials in complex aerospace structures. The contractor shall investigate material inelasticity, anisotropy, time, and temperature dependence for the purpose of developing constitutive relationships. The contractor shall



develop continuum or multiscale mechanics-based models to describe material strength when dominant cracks are not present. The contractor shall develop fracture mechanics-based failure methodologies to predict the residual strength of materials with dominant cracks to assess damage tolerant structural requirements. The contractor shall develop fatigue crack growth and life prediction methodologies to address damage tolerance requirements. The contractor shall develop analytical and computational methodologies at the atomistic-, grain- and continuum length scales to interrogate damage processes in composite, metallic, or hybrid metallic-composite materials. The contractor shall develop efficient, integrated radiation shielding analysis and design tools for assessing the radiation environment, risk, and effectiveness of multifunctional shielding materials.

#### **2.1.2 Structural Dynamics**

The contractor shall conduct analytical and experimental research for the purpose of developing and validating improved methods to predict, verify, and control complex aircraft and space structures dynamic responses, and to confirm the validity of approaches by conducting tests on full-scale structures, structural elements, and scaled structural models. The contractor shall conduct research to improve the safety and handling performance of aircraft during all-weather ground operations, including takeoff, landing impact, and ground handling phenomena. The contractor shall conduct research to assess runway treatments and effects on aircraft and tire performance, as well as develop and validate new dynamic test techniques.

#### **2.1.3 Aeroelasticity**

The contractor shall study aeroelastic phenomena and prediction capabilities needed to apply new aerodynamics and structural concepts to future flight vehicles and to determine and solve the aeroelastic problems of current designs. The contractor shall develop and validate advanced control concepts that employ smart materials or aerodynamic control surfaces for suppressing aeroelastic response and alleviating loads and vibration. The contractor shall develop and validate advanced control concepts for ground testing simulations (including the conception, recommendation, and technical support), wind-tunnel tests, and flight experiments to validate the methodologies. The contractor shall develop and validate advanced control concepts including generation of mathematical models required to support NASA flight projects and perform studies to verify theoretical developments involving advanced control concepts. The contractor shall provide technical support in flutter prevention programs for new vehicles through analysis and aeroelastically scaled model tests.

#### **2.1.4 Structural Mechanics and Concepts**

The contractor shall conduct analytical and experimental research to study the behavior of complex structures subject to static and time-varying mechanical and thermal loads. The contractor shall investigate basic thermal and structural behavior and thermal effects on structural behavior. The contractor shall develop advanced analysis methods for predicting thermal and structural response, including nonlinear performance and complex material behavior. The contractor shall confirm the validity of analysis methods and validate structural performance by conducting thermal and structural experiments at the element, component, and large-scale test article levels. Structural experiments shall be



conducted at temperatures ranging from -400°F to 3000°F. The contractor shall develop efficient structural concepts for future aircraft, space structures, and space transportation systems that exploit the benefits of advanced material systems. The concepts shall include, but are not limited to, primary structure, cryogenic tanks, lightweight durable thermal protection systems, and cooled structural concepts. The contractor shall develop advanced design methods that reduce design cycle time, including sizing, optimization, and uncertainty and account for material, thermal, and structural interactions.

#### **2.1.5 Advanced Materials and Processing**

The contractor shall conduct fundamental and applied materials and processing research studies that cover the development and integration of the full range of aerospace materials (polymers, metals, ceramics, composites derived from combinations of any of the three areas and emerging materials technologies) into aerospace systems. The goal of such research is to develop improved materials concepts for efficient aerospace structures and applications. Fundamental and applied materials studies shall include computational modeling and analysis, experimental synthesis, processing, fabrication, characterization, environmental exposure (through ground-based environmental tests and flight service evaluation), and testing to enable structure-processing-property correlations of materials at various stages within the manufacturing process and following environmental exposure. The contractor shall conduct investigations on processing variables for fabricating components for advanced aerospace structures and determine the effects of these variables on material properties. The contractor shall integrate new materials systems into structural designs and manufacture structural subcomponents and components for characterization and testing of larger scaled test articles. The contractor shall employ industry-standard and develop new methods of processing, manufacturing and assembly, using novel materials, processes, and procedures for aircraft and space structural components and other aerospace applications.

#### **2.1.6 Nondestructive Evaluation Sciences**

The contractor shall conduct research, develop, and apply advanced measurement techniques that relate quantitative nondestructive evaluation sciences to physical/engineering materials and structures characterization. These techniques include new applications using properties of ultrasound, acoustic emission, acoustic microscopy, magnetics, optics, radiography, fiber optics, computed tomography, and thermography. The contractor shall develop prototype instrumentation, systems, nondestructive evaluation, and inspection techniques for materials and structures that are applicable both in the laboratory and in the field. These techniques should address advanced polymeric and metal matrix composites, carbon-carbon and ceramic materials, advanced metals, smart materials and structures for both current and next generation subsonic, supersonic, and hypersonic aircraft structures and systems, shuttle systems, solid rocket motor structures, and testing in laboratory environments. The contractor shall perform testing of nondestructive evaluation techniques on advanced materials and structures and give assessments of the capabilities of such techniques.

### **3.0 Aerodynamic, Aerothermodynamic and Acoustics Research & Technology for Aerospace Vehicles**



### **3.1 Aerodynamic, Aerothermodynamic and Acoustics**

Task orders will be written to support research and development in aerodynamics, aerothermodynamics, and acoustics technology related to aerospace vehicles, with emphasis in the research areas of configuration aerodynamics, computational modeling and simulation, flow physics and control, aircraft and spacecraft noise and vibration prediction and control, aerothermodynamics, hypersonic airbreathing propulsion, advanced measurement, diagnostics, and instrument systems, and model systems. The technology covers a wide variety of aerospace vehicles concepts that may include both Earth and other planetary flight applications. Vehicle configurations of interest may include traditional as well as non-traditional concepts. Vehicle flight speed regimes of interest may extend from subsonic through flight at hypersonic speeds. Research and development in these technical areas may include the use of systems analysis to determine the potential benefits of the various technologies.

#### **3.1.1 Configuration Aerodynamics**

The contractor shall conduct applied experimental and computational research focused on the development of advanced configuration concepts for all classes of fixed-wing aircraft at subsonic, transonic, and supersonic speeds. The contractor shall conceive and evaluate innovative aircraft plan-form shapes, control effectors, and propulsion system installations and assess the suitability for further development. This research shall include the development of an understanding of the flow physics and integrated aerodynamic characteristics associated with these classes of aircraft. The contractor shall perform assessments of vehicle performance at cruise, off-design, and high-lift conditions using experimental and computational methods. Occasional modification/adaptation of computational tools may be required for performing design and assessment of revolutionary and evolutionary air vehicle configurations. The contractor shall conduct studies to optimize all aspects of configuration external shape and to develop and use active and passive configuration shaping, active and passive flow control methods, thrust vectoring for control, and advanced propulsion system installations for improving performance, stability and control, and maneuverability. In addition, the contractor shall conduct studies also aimed at understanding and optimizing the mutual interference effects that exist between aircraft components such as the wing, fuselage, propulsion system, and external stores to significantly increase performance.

#### **3.1.2 Computational Modeling and Simulation**

The contractor shall develop computational methods that can be used to improve fundamental understanding of physics associated with the fluid mechanics and noise generation for complex airframe systems. The contractor shall conduct computational research in aerodynamics and acoustics with applications in all speed regimes, from subsonic to hypersonic flight. The contractor shall utilize the full range of mathematical equations for fluid dynamic and acoustics, including various levels of modeling that range from linearized to fully non-linear equations. The contractor shall conduct research in grid generation and fluid dynamics/aeroacoustic equation solution methods for both structured and unstructured grid topologies. In particular, the contractor shall perform



advanced research aimed at the development and validation of steady and unsteady solutions to the Reynolds-Averaged Navier-Stokes equations. The contractor shall provide for the timely transfer of validated computer software to Langley researchers and organizations, including the creation and transfer of appropriate computer code documentation. The contractor shall develop new analytical and numerical methods and extensions of existing computational methods for the analysis and design of complex three-dimensional configurations, including the exploration of massively parallel and distributed workstation-class computers for affordable computations. The contractor shall also conduct research aimed at developing higher order accurate algorithms and improved boundary condition procedures for the prediction of aeroacoustic noise for advanced subsonic and supersonic aircraft. The contractor shall conduct both basic and applied research aimed at improving the physical understanding of advanced techniques and models for the prediction and control of turbulent flows, with an emphasis on the high Reynolds number flows encountered on full-scale aircraft configurations. The contractor shall also conduct computational methods research for a wide range of applications, including rapid and robust adaptive unstructured grid analysis and design methods, airframe noise prediction and control methods, turbulence and transition modeling and validation, and time-dependent flow fields for application to flow control device design, vehicle stability and control, and vehicle aeroelastic stability prediction.

### **3.1.3 Flow Physics and Control**

The contractor shall conduct fundamental experimental and computational research to enhance the knowledge and understanding of the physics underlying boundary-layer transition, active and passive flow control, three-dimensional flow physics, turbulence, vortical and separated flows. The contractor shall apply this understanding in the development of advanced computational and analytical methods for the prediction of boundary-layer transition and in developing techniques for controlling viscous fluid flows. The contractor shall conduct experiments to obtain detailed flow field and surface data to validate Computational Fluid Dynamics (CFD) methods. The contractor shall apply advanced wind tunnel and experimental test techniques across the speed range from low subsonic to hypersonic speeds.

### **3.1.4 Aircraft and Spacecraft Noise Prediction and Control**

The contractor shall conduct research aimed at understanding, predicting, and controlling the noise of all classes of aircraft (including both fixed- and rotary-wing) and spacecraft. The contractor shall conduct research to understand and control interior noise and vibration and its effects on aircraft, rotorcraft, and spacecraft structures, passengers, and crew. The contractor shall conduct research that includes fundamental, theoretical, analytical, and experimental components as well as applied efforts. The contractor shall conduct research on the fluid mechanics and acoustics of jets, nacelle and fan noise, airframe noise, and propulsion/airframe aeroacoustics. The contractor shall conduct research to understand noise generation processes, to develop methods for predicting acoustics and flow fields and their interactions, and to identify and demonstrate noise reduction and control techniques. The contractor shall develop advanced active and passive interior noise control concepts for vehicles manufactured with conventional, advanced metallic, or composite materials. The contractor shall also conduct research to



understand, predict, and control the response of vehicle structures of advanced metallic and composite materials to intense acoustic loads, for acoustic fatigue avoidance. The contractor shall conduct research to understand, predict and control the dynamic pressure loads and vibration associated with space vehicle launch noise and vibration including launch blast, maximum dynamic pressure, and transonic flight regimes. The contractor shall conduct experimental research in anechoic facilities, laboratories, wind tunnels, and on vehicles in flight. The contractor shall develop noise-prediction computer software that ranges from analytical and CFD-based methods to empirical and semi-empirical aircraft systems and airport noise prediction methods.

### **3.1.5 Aerothermodynamics**

The contractor shall conduct research to assesses, optimize, and benchmarks the national access-to-space and planetary entry vehicle concepts. The contractor shall develop new aerothermodynamic technologies to enable and enhance vehicle performance. The contractor shall conduct research to understand complex flowfield physics associated with aerospace vehicles. The contractor shall develop rapid, high fidelity computational/experimental tools required for vehicle assessment and technology advancement.

### **3.1.6 Hypersonic Airbreathing Propulsion**

The contractor shall conduct multidisciplinary research to develop advanced technologies for hypersonic airbreathing propulsion systems for aerospace vehicles. The focus of the research will be on airframe-integrated engine concepts having high performance over a wide range of flight Mach numbers. The contractor shall conduct research that develops and validates integrated multidisciplinary methods for design and analysis with both fundamental physics and phenomenological models including effects of turbulence, mixing, finite-rate reactions, fuel injection, and geometry on ignition, combustion and thrust performance across the speed regime from takeoff to orbital velocity. Innovative concepts for vehicle-integrated airbreathing-engines shall be developed and evaluated. The contractor shall predict complete airframe-engine performance characteristics for both ground-test and flight-test conditions using experimentally verified analysis methods. Innovative experimental techniques and diagnostics shall be developed for application in tests of airframe-integrated engines in ground test facilities. The contractor shall utilize appropriate test data, or conduct tests of complete subscale and large-scale engines, to assess and to improve integrated engine and aero-thermo-structural performance.

### **3.1.7 Advanced Measurement, Diagnostics and Instrument Systems**

The contractor shall conduct research and development of experimental measurement and sensing techniques for aerospace research and development applications. Utilizing expertise ranging from laser based diagnostics, to analytical chemistry, to optical physics, to advanced sensors and actuators, the contractor shall develop a variety of advanced sensing technologies, methods and/or systems. The contractor shall conduct research aimed at discovering and developing radical new techniques to allow the measurement and quantification of the aerodynamic properties associated with advanced vehicle concepts in addition to determining optical properties of materials, and utilizing

optical/laser systems for exploration, rendezvous and docking, hazard avoidance, and earth science studies.

### **3.1.8 Model Systems**

The contractor shall perform research to develop state of the art test-articles, electro-mechanical instrumentation systems that enable achievement of NASA's research and development goals. The contractor shall perform applied research for development of sub-scaled flying vehicles, electromechanical systems and discrete measurement systems using systems engineering theory to insure the complete integration of complex hardware and instrument systems. The contractor shall conduct research to assess and improve current capabilities for scaled model systems. The contractor shall develop model systems for a variety of applications, including morphing and dynamic control for test articles, cycle time reduction efforts and characterization and integration of sensors (strain, force, and angle-of-attack).

## **4.0 Integration**

The contractor shall conduct research and development for the integration of structures and material technologies with aerodynamic, aerothermodynamic & acoustics technologies. The contractor shall provide detailed systems analysis for both revolutionary and evolutionary vehicle concepts including evaluating the relative merits of individual technologies within a vehicle system. This capability shall include the ability to assess multidisciplinary implications (aerodynamics, noise, structures, observables, etc.) of evolutionary and revolutionary vehicle concepts and advanced technology integration into those concepts.

## **5.0 Software Engineering**

For tasks involving software development for the research efforts stated in PWS, the contractor shall follow procedures to ensure NASA compliance with NPR 7150.2, Software Engineering Requirements. Software development under the contract shall be research software with a designation of class of D or E, as defined in NPR 7150.2. Responsibilities include preparation of software development plans; verification, validation, documentation, and version control of source code; and procedures required to rebuild, modify, and install application software. Specific requirements will be specified at the task order level.



<b>DEPARTMENT OF DEFENSE</b> <b>CONTRACT SECURITY CLASSIFICATION SPECIFICATION</b> <i>(The requirements of the DoD Industrial Security Manual apply to all security aspects of this effort.)</i>				<b>1. CLEARANCE AND SAFEGUARDING</b> a. Facility Clearance Required <div style="text-align: center;">SECRET</div> b. Level of Safeguarding Required <div style="text-align: center;">SECRET</div>	
<b>2. THIS SPECIFICATION IS FOR:</b> <i>(X and complete as applicable)</i>				<b>3. THIS SPECIFICATION IS:</b> <i>(X and complete as applicable)</i>	
<input checked="" type="checkbox"/>	a. Prime Contract Number NNL10AA07B		<input checked="" type="checkbox"/>	a. Original <i>(Complete date in all cases)</i> Date (yyyymmdd) 20100413	
<input type="checkbox"/>	b. Subcontract Number		<input type="checkbox"/>	b. Revised <i>(Supersedes all previous spec)</i>	Revision No.
<input type="checkbox"/>	c. Solicitation or Other Number		<input type="checkbox"/>		Date (yyyymmdd)
	Due Date (yyyymmdd)		<input type="checkbox"/>		Date (yyyymmdd)
<b>4. IS THIS A FOLLOW-ON CONTRACT?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    If Yes, complete the following: Classified material received or generated under <u>NNL04AA13B</u> <i>(Preceding Contract Number)</i> is transferred to this follow-on contract.					
<b>5. IS THIS A FINAL DD FORM 254?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    If Yes, complete the following: In response to the contractor's request dated _____ retention of the classified material is authorized for the period of _____.					
<b>6. CONTRACTOR</b> <i>(Include Commercial and Government Entry (CAGE) Code)</i>					
a. Name, Address, and ZIP Code NORTHROP GRUMAN SYSTEMS CORP ONE HORNET WAY EL SEGUNDO, CA 90245		b. CAGE Code 76823	c. Cognizant Security Office <i>(Name, Address, and ZIP Code)</i> Defense Security Service (IOFWH) 10801 Walker Street, Suite 240 Cypress, CA 90630 Main: 714-827-2580    Fax: 714-827-7040		
<b>7. SUBCONTRACTOR</b>					
a. Name, Address, and ZIP Code		b. CAGE Code	c. Cognizant Security Office <i>(Name, Address, and ZIP Code)</i>		
<b>8. ACTUAL PERFORMANCE</b>					
a. Location NORTHROP GRUMAN SYSTEMS CORP ONE HORNET WAY EL SEGUNDO, CA 90245		b. CAGE Code 76823	c. Cognizant Security Office <i>(Name, Address, and ZIP Code)</i> Defense Security Service (IOFWH) 10801 Walker Street, Suite 240 Cypress, CA 90630 Main: 714-827-2580    Fax: 714-827-7040		
<b>9. GENERAL IDENTIFICATION OF THIS PROCUREMENT</b> Structures, Materials, Aerodynamics, Aerothermodynamics, and Acoustics Research and Technology (SMAAART)					
<b>10. CONTRACTOR WILL REQUIRE ACCESS TO:</b>			<b>11. IN PERFORMING THIS CONTRACT, THE CONTRACTOR WILL:</b>		
	Yes	No		Yes	No
a. COMMUNICATIONS SECURITY (COMSEC) INFORMATION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. HAVE ACCESS TO CLASSIFIED INFORMATION ONLY AT ANOTHER CONTRACTOR'S FACILITY OR A GOVERNMENT ACTIVITY	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. RESTRICTED DATA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. RECEIVE CLASSIFIED DOCUMENTS ONLY	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. CRITICAL NUCLEAR WEAPON DESIGN INFORMATION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. RECEIVE AND GENERATE CLASSIFIED MATERIAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. FORMERLY RESTRICTED DATA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	d. FABRICATE, MODIFY, OR STORE CLASSIFIED HARDWARE	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. INTELLIGENCE INFORMATION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	e. PERFORM SERVICES ONLY	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(1) Sensitive Compartmented Information (SCI)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	f. HAVE ACCESS TO U.S. CLASSIFIED INFORMATION OUTSIDE THE U.S., PUERTO RICO, U.S. POSSESSIONS AND TRUST TERRITORIES	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2) Non-SCI	<input type="checkbox"/>	<input checked="" type="checkbox"/>	g. BE AUTHORIZED TO USE THE SERVICES OF DEFENSE TECHNICAL INFORMATION CENTER (DTIC) OR OTHER SECONDARY DISTRIBUTION CENTER	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. SPECIAL ACCESS INFORMATION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	h. REQUIRE A COMSEC ACCOUNT	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. NATO INFORMATION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	i. HAVE TEMPEST REQUIREMENTS	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h. FOREIGN GOVERNMENT INFORMATION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	j. HAVE OPERATIONS SECURITY (OPSEC) REQUIREMENTS	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i. LIMITED DISSEMINATION INFORMATION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	k. BE AUTHORIZED TO USE THE DEFENSE COURIER SERVICE	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j. FOR OFFICIAL USE ONLY INFORMATION	<input checked="" type="checkbox"/>	<input type="checkbox"/>	l. OTHER <i>(Specify)</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
k. OTHER <i>(Specify)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			



12. PUBLIC RELEASE. Any information (classified or unclassified) pertaining to this contract shall not be released for public dissemination except as provided by the Industrial Security Manual or unless it has been approved for public release by appropriate U.S. Government authority. Proposed public releases shall be submitted for approval prior to release ☐ Direct ☒ Through (specify)

NASA Langley Research Center, Mail Stop 126, Hampton, VA 23681-0001  
Attn: Connie Snapp, 1- 757 - 864-7928 (c.snapp@nasa.gov)

to the Directorate for Freedom of Information and Security Review, Office of the Assistant Secretary of Defense (Public Affairs)\* for review.  
\*In the case of non-DoD User Agencies, requests for disclosure shall be submitted to that agency.

13. SECURITY GUIDANCE. The security classification guidance needed for this classified effort is identified below. If any difficulty is encountered in applying this guidance or if any other contributing factor indicates a need for changes in this guidance, the contractor is authorized and encouraged to provide recommended changes; to challenge the guidance or the classification assigned to any information or material furnished or generated under this contract; and to submit any questions for interpretation of this guidance to the official identified below. Pending final decision, the information involved shall be handled and protected at the highest level of classification assigned or recommended. (Fill in as appropriate for the classified effort. Attach, or forward under separate correspondence, any documents/guides/extracts referenced herein. Add additional pages as needed to provide complete guidance.)

Classification guidance shall be provided by the user Agency as necessary

Performance of the contract shall require access to classified information at the location identified in Section 8 of this specification. The contractor will be supporting research and development programs requiring individuals, as identified by the Government, to be cleared at the Secret level.

Some of the work performed on this contract may be performed at Government Facilities where classification guidance will be provided as necessary.

The Contractor Facility Security Officer (FSO) shall certify the security clearance status of employees supporting this contract via standard visit request submitted annually or as required to the certifier identified in Section 16A. The visit request shall include the level of clearance, date of issue, investigation type and data completed.

Contractors performing services on contracts involving access to classified information are subject to security inspections by NASA Security representatives in addition to any oversight visits performed by the Defense Security Service.

The Certifier in Section 16A shall immediately be provided a copy of any DD Form 254 issued to subcontractors performing work for this contract.

14. ADDITIONAL SECURITY REQUIREMENTS. Requirements, in addition to ISM requirements, are established for this contract. (If Yes, identify the pertinent contractual clauses in the contract document itself, or provide an appropriate statement which identifies the additional requirements. Provide a copy of the requirements to the cognizant security office. Use Item 13 if additional space is needed.)

☐ Yes ☒ No

15. INSPECTIONS. Elements of this contract are outside the inspection responsibility of the cognizant security office. (If Yes, explain and identify specific areas or elements carved out and the activity responsible for inspections. Use Item 13 if additional space is needed.)

☐ Yes ☒ No

16. CERTIFICATION AND SIGNATURE. Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified effort. All questions shall be referred to the official named below.

a. Typed Name of Certifying Official  
MICHEAL C. RAMMEL

b. Title  
INDUSTRIAL SECURITY SPECIALIST

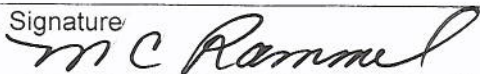
c. Telephone (Include Area Code)  
(757) 864-3419

d. Address (Include Zip Code)  
NASA LANGLEY RESEARCH CENTER  
MS 163 ATTN: M RAMMEL  
HAMPTON, VA 23681-0001

17. REQUIRED DISTRIBUTION

- ☒ a. CONTRACTOR  
☒ b. SUBCONTRACTOR  
☒ c. COGNIZANT SECURITY OFFICE FOR PRIME AND SUBCONTRACTOR  
☐ d. U.S. ACTIVITY RESPONSIBLE FOR OVERSEAS SECURITY ADMINISTRATION  
☒ e. ADMINISTRATIVE CONTRACTING OFFICER  
☒ f. OTHERS AS NECESSARY

e. Signature



**EXHIBIT C - CONTRACT DOCUMENTATION REQUIREMENTS**

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**I. DOCUMENTATION REQUIREMENTS****A. Omitted (Reserved)****B. Monthly Financial Management Report**

1. The Contractor shall submit a monthly financial management report as provided by the NFS clause 1852.242-73, NASA Financial Management Reporting. This report shall be submitted utilizing NASA Form 533M, Monthly Contractor Financial Management Report, in accordance with submission instructions contained on the reverse side of the form.

2. For this task order contract, a 533M shall be provided for the levels indicated below:

a. Each Authorized Task

b. Contract Total. (Column 9b shall reflect total estimated cost of \$# plus fixed fee of \$#.)

c. Due not later than the 15th working day following the close of the Contractor's accounting period being reported.

d. (Do not change the percentages shown below without concurrence of Deputy CFO-Reference FMM 9061-5A).

It is NASA's goal to improve the integrity of its financial data. Since NASA uses the Contractor's estimate for the current month (column 8a of the 533M) as accrued costs in its monthly financial statements, it is important that this estimate be your best projection of the actual costs to be reported in column 7a of the subsequent month's 533M.

Therefore, each NF533M shall include a narrative explanation for variances exceeding +5 percent between estimated dollars shown in the prior month and actual dollars shown in the current month at the total contract level. (For example, the estimated dollars shown for June in column 8a. in the May 533M and the actual June dollars shown in column 7a. in the June 533M.) Accuracy of financial reporting will be evaluated as part of the annual performance evaluation.

3. The minimum reporting categories specified in A. above shall be included in column 6 of this report.

**C. Monthly Technical Letter Progress Report** -- The Contractor shall submit monthly technical letter reports for each task order describing progress of the task to date, noting all technical areas in which effort is being directed and indicating the status of work within these areas. Tasks may be summarized in one letter report, unless otherwise stipulated in individual task orders. Reports shall be in narrative form, brief and informal in content. These reports shall include:



1. A narrative statement of work accomplished during the report period.
2. A statement of current and potential problem areas and proposed corrective action.
3. A discussion of work to be performed during the next report period.
4. The direct labor-hours and total cost expended during the report period as well as the cumulative direct labor hours and total cost expended to date for each task order and the projected direct labor hours and total cost to be expended to completion of the task.

The monthly progress report **shall be submitted within 10 working days after the end of each calendar monthly report period.** A monthly report shall not be required for the period in which the final report is due. This submittal shall be subject to the provisions of the Section I, FAR clause 52.242-2 Production Progress Reports.

**D. Final Reports** -- Each task order may require the Contractor to submit a final report, either formal or informal, which documents and summarizes the results. When a formal final Contractor report is required, it shall be submitted in accordance with the instructions contained in NASA FAR Supplement clause 1852.235-73 Final Scientific and Technical Reports. The specified number of approval copies shall be submitted within the time specified in the task orders.

**E. Information Technology (IT) Security Implementation Plan** - The Contractor shall submit the IT Security Implementation Plan in accordance with NFS clause 1852.204-76 Security Requirements for Unclassified Information Technology Resources for Contracting Officer approval no later than 30 calendar days after award.

**F. Annual Information Technology (IT) Security Training Report** - The purpose of this report is to obtain confirmation that IT security training for contractor employees required under paragraph (b) of NFS clause 1852.204-76 Security Requirements for Unclassified Information Technology Resources (November 2004[Deviation]), has been completed by all individuals required to do so. NASA requires that this annual training be completed by 100% of the appropriate employees **no later than June 30<sup>th</sup> of each year.** Accordingly, a report that includes the information listed below shall be submitted to the Contracting Officer no later than June 30 of each calendar year, so long as the period of performance of the contract has not expired prior to June 30th.

Report Content: (1) the number of employees requiring IT security training in accordance with the contract clause (i.e., in accordance with NPR 2810.1 Nondiscrimination in Federally Assisted and Conducted Programs, which requires such training for all "employees who have access to NASA computer systems and networks that process, store, or transmit information"); (2) the number of those employees in item (1) that have completed the annual training as of June 30th; (3) whether the NASA on-line training system was used (use of the NASA on-line system is optional); and (4) a plan of action with milestones to reach 100% in item (2) if that level has not been achieved by June 30th.



**G. NASA Property in the Custody of Contractors (NASA FORM (NF) 1018) -** The Contractor shall submit the NF 1018 no later than October 15th of each year in accordance with the Section I, NFS clause entitled 1852.245-73 Financial Reporting of NASA Property in the Custody of Contractors.

**H. Subcontracting Reports**

1. NASA's preferred method for obtaining both Standard Form 294, Subcontracting Report for Individual Contracts, and Standard Form 295, Summary Subcontractor Report is electronically using Electronic Subcontract Reporting System (eSRS). Access to eSRS can be found at: <http://www.esrs.gov/>

If the Contractor does not submit an electronic SF 294 and SF295 using eSRS, the Contractor shall follow the instructions found on the reverse of the forms and the instructions for distribution under paragraph of this section entitled: II. Document Distribution Requirements.

In addition to the above, the Contractor is required to comply with NFS Clause 1852.219-75, Small Business Subcontracting Reporting.

2. The Contractor shall submit an SDB Participation Report in accordance with the Section I FAR Clause 52.219-25, Small Disadvantaged Business Program -- Disadvantaged Status and Reporting. This report shall be submitted within 30 calendar days after the end of each contract year.

**I. Quality Plan** – Within 30 calendar days after the effective date of the contract, the Contractor shall submit a quality plan that addresses how the contract quality requirements will be met. The plan identifies how the contractor will develop quality system documentation or modify existing quality system documentation needed to ensure effective planning, operation and control of processes/work activities specific to this contract. This plan will describe how the integrity of the Quality Management System (QMS) is maintained when changes to the QMS are planned and implemented. The plan and subsequent revisions will be reviewed and approved by the Contracting Officer or the designated representative. As part of the plan, contractors that are ISO 9001 certified/registered will provide a copy of the ISO 9001 Certification/Registration certificate. Contractors that are not ISO 9001 certified/registered will submit a compliance plan for becoming ISO 9001 certified/registered within 9 months of contract award. Contractors that are AS9100 certified/registered will provide a copy of the AS9100 Certification/Registration certificate. Contractors that are not AS9100 certified/registered will submit a compliance plan for becoming AS9100 certified/registered within 9 months of contract award.

**J. Federal Contractor Veterans Employment Report** -- In compliance with Clause 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans, the Contractor shall submit the Federal Contractor Veterans Employment Reports (VETS-100) as required by this clause.

**K. Reserved**

*For contracts with small businesses and nonprofit organizations that contain the clause at FAR 52.227-11 Patent Rights--Retention by the Contractor (Short Form) (as modified by 1852.227-11 Patent Rights--Retention by the Contractor (Short Form))*

**L. Interim patent rights report** - After the first anniversary date of the contract, the Contractor shall submit an annual list of all subject inventions to be disclosed as set forth in FAR 52.227-11 Patent Rights--Retention by the Contractor (Short Form) (as modified by 1852.227-11 Patent Rights--Retention by the Contractor (Short Form)).

**M. Final patent rights report** - The Contractor shall submit a listing of all subject inventions or certify that there were none as set forth in FAR 52.227-11 Patent Rights--Retention by the Contractor (Short Form) (as modified by 1852.227-11 Patent Rights--Retention by the Contractor (Short Form)). This report is due prior to contract closeout.

**N. Invention disclosure reporting** - The Contractor shall disclose each subject invention under the contract as set forth in FAR 52.227-11 Patent Rights--Retention by the Contractor (Short Form) (as modified by 1852.227-11 Patent Rights--Retention by the Contractor (Short Form)). The electronic and paper version of NASA Form 1679, Disclosure of Invention and New Technology (Including Software), shall be used for this reporting. Both the electronic and paper versions of this form may be accessed at <http://invention.nasa.gov>. Disclosures are required **within two months after the inventor discloses it in writing to Contractor personnel** who are responsible for patent matters.

*For contracts with large businesses that contain the clause at NFS 1852.227-70 New Technology*

**L. Interim New Technology report** - After the first anniversary date of the contract, the Contractor shall submit an annual list of subject inventions, certify that all subject inventions have been disclosed (or that there are no such inventions), and certify that the procedures required by paragraph (e)(1) of the NFS clause 1852.227-70 New Technology, clause have been followed. This report is due by March 31 of each year.

**M. Final New Technology report** - The Contractor shall submit a list of subject inventions or certify that there were no such subject inventions, and list all subcontracts at any tier containing a patent rights clause or certify that there were no such subcontracts as set forth in NFS 1852.227-70 New Technology. This report is due within 3 months after completion of the contracted work.

**N. Invention disclosure reporting** - The Contractor shall disclose each subject invention under the contract as set forth in NFS 1852.227-70 New Technology. The electronic and paper version of NASA Form 1679, Disclosure of Invention and New Technology (Including Software) shall be used for this reporting. Both the electronic and paper versions of this form may be accessed at <http://invention.nasa.gov>. Disclosures are required within two months after the inventor discloses it in writing to Contractor personnel who are responsible for the administration of the New Technology clause.



**O. Organizational Conflicts of Interest (OCI) Avoidance Plan** – The Contractor shall submit a comprehensive OCI Avoidance Plan in accordance with H.13 (OCI Avoidance Plan) within 10 calendar days from the effective date of the contract. The plan shall address the contractor's approach to identifying, mitigating and/or avoiding organizational conflicts of interest (OCIs) and personal conflicts of interest (COIs) that may arise under this contract. This response must include, at a minimum: (A) an assessment of the potential risk for various types of conflicts such as access to government sensitive or industry proprietary data that may result from the award of this contract, (B) the contractor's process for identifying OCIs, including the contractor's coordination with each of its parent, subsidiaries, affiliates, office locations, divisions and/or other similar entities (collectively, the "Business Units") to determine whether OCIs currently exist, (C) the approach for maintaining communication with each Business Unit during the performance of this contract to identify potential OCIs arising during such performance period, (D) the approach to training and refresher training for its employees, (E) once identified, the methods the contractor will utilize to mitigate the various types of OCIs, (F) the approach for identifying, mitigating and/or avoiding personal OCIs for employees performing work under the contract, and (G) the approach for ensuring the processes and procedures included herein will be applied to each of its subcontractors and/or consultants (including their respective Business Units). The plan and subsequent revisions will be reviewed and approved by the Contracting Officer. The approved plan will be incorporated into the contract as a compliance document once approved in accordance with NFS 1852.237-72.

## **II. DOCUMENT DISTRIBUTION REQUIREMENTS**

A. Unless otherwise specified elsewhere in this contract, reports and other documentation shall be submitted F.O.B. destination as specified below, addressed as follows:

National Aeronautics and Space Administration Langley Research Center Attn: See Below  
Mail Stop: See Below Contract: NNL10AA07B Hampton, VA 23681-2199

B. The following letter codes designate the recipients of reports and other documentation which are required to be delivered prepaid to Langley Research Center by the Contractor:

1. A--Contract Specialist, Mail Stop 126
2. B--Contracting Officer Technical Representative, Mail Stop 162
3. C--New Technology Representative, Mail Stop 401
4. F--Contractor Labor Relations Officer, Mail Stop 144
5. G--Financial Management, Mail Stop 175
6. H--Patent Counsel, Mail Stop 141
7. J--Small Business Specialist, Mail Stop 134

8. K--Center Information Technology Security Manager (CITSM), Mail Stop 164

9. L--According to instructions on form

10. M--As required by Task Order

11. N--Task Monitor

12. O--Langley Management System Project Office, Mail Stop 438

13. P--Industrial Property Officer, Mail Stop 377

C. The following are the distribution requirements for reports and other documentation required to be delivered f.o.b. destination. The numeral following the letter code specifying the number of copies to be provided:

DISTRIBUTION REQUIREMENTS		
Document Letter	Document	Distribution Code and Quantity
<b>A</b>	Initial Baseline Financial Management Report	A-1, B-1, D-1, G-1
<b>B</b>	Monthly Financial Management Report (NASA Form 533M)	A-1, B-1, D-1, G-1
<b>C</b>	Monthly Technical Letter Progress Report	A-1, B-1, M-1, N-1
<b>D</b>	Final Reports	A-1, B-2, N-1
<b>E</b>	Information Technology (IT) Security Implementation Plan	A-1, K-1
<b>F</b>	Annual Information Technology (IT) Security Training Report	A-1, K-1
<b>G</b>	NASA Property in the Custody of Contractors (NASA FORM (NF)1018)	G-1, P-1
<b>H</b>	Subcontracting Reports	A-1, J-1
<b>I</b>	Quality Plan	A-1, B-1, O-1
<b>J</b>	Federal Contractor Veterans Employment Report (VETS-100)	L
<b>K</b>	Reserved	
<p><i>For contracts with small businesses (SB) that contain the clause at FAR 52.227-11, Patent Rights-Retention by the Contractor (short form)(as modified by 1852.227-11 Patent Rights-Retention by the Contractor (Short Form) deliverables are annotated with (SB).</i></p> <p><i>For contracts with large businesses that contain the clause at NFS 1852.227-70 New Technology deliverables are annotated with (LB).</i></p>		
<b>L</b>	Interim Patent Rights Report (SB)/Interim New Technology Report (LB)	A-1, B-1, C-1, H-1
<b>M</b>	Final Patent (SB)/Final New Technology Report (LB)	A-1, B-1, C-1, H-1
<b>N</b>	Invention Disclosure Reporting (SB)/ Invention Disclosure	A-1, B-1, C-1, H-1

	Reporting ( <b>LB</b> )	
<b>O</b>	Organizational Conflicts of Interest Mitigation Plan	A-1, B-1

D. When the Contract Specialist (A) is not designated above to receive a copy of a report or document, the Contractor shall furnish a copy of the report/document transmittal letter to the Contract Specialist. If delegated, the Contractor shall also furnish a copy of the transmittal letter and a copy of each Financial Management Report to the delegated Administrative Contracting Officer of the cognizant DoD (or other agency) contract administrative services component

**EXHIBIT F - RESERVED**

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## **EXHIBIT J - DIRECT LABOR CLASSIFICATION DESCRIPTIONS**

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### **Technical Professional:**

**Computer Scientist** – Resolves a variety of difficult operation problems (e.g., making unusual equipment connections and rarely used equipment and channel configurations to direct processing through or around problems in equipment, circuits, or channels or reviewing test run requirements and developing unusual system configurations that will allow test programs to process without interfering with ongoing job requirements). May spend considerable time providing technical assistance to lower level operators and assisting programmers, systems analysts, and subject matter specialists in resolving problems.

**Engineer** – Develops engineering specifications based on research requirements; develops designs, performs supporting analyses, documents findings.

**Engineer Supervisor** – Provides line management for engineering and technical personnel. Ensures appropriate utilization of resources and reports individual performance.

**Operational Aircraft Pilot** – Provides pilot capabilities for aircraft or simulated aircraft. Assists with project activities that benefit from pilot expertise.

**Project Manager** – Responsible for overall project implementation. Tracks progress and resources (cost & manpower). Documents and reports progress and deficiencies. Recommends and implements strategies for solving problems.

**Research Scientist** – Senior level engineering or research personnel providing direct research support. Duties include basic research, design and development of tests, supervision and performance of tests as well as professional level documentation such as journal articles.

<b><u>Experience Levels</u></b>	<b><u>Recommended Education and Years of Work Experience</u></b>
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<b>Category I</b>	Entry Level Engineer - Bachelor Degree in Engineering, Science, or Mathematics (as appropriate)
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<b>Category II</b>	Master Degree with up to 3 years experience or Bachelor Degree with up to 5 years experience
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<b>Category III</b>	Ph.D. with up to 3 years experience, Master Degree with 3 - 6 years experience, or Bachelor Degree with 5 - 10 years experience
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<b>Category IV</b>	Ph.D. with 3 or more years of experience, Master Degree with 6 or more years experience, or Bachelor Degree with 10 or more years of experience
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<b>Category V</b>	Ph.D. with 10 or more years experience or Master Degree with more than 15 years experience
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**Support Personnel:**

**Administrative Associate** – Performs specialized administrative support tasks of non-routine and non-repetitive nature to assist technical, and/or administrative personnel. Performs professional level tasks requiring independent judgments, initiative, and tact.

**Scheduler/Cost Analyst** – Develops and maintains project level budgets and schedules. Tracks and updates project progress through use of computer-based COTS software.

**Systems Analyst** – Monitors and maintains computer system resources. Troubleshoots and corrects hardware problems.

**Experience Levels**      **Recommended Education and Years of Work Experience**

<b>Category I</b>	High School
<b>Category II</b>	Associate Degree (or Appropriate Certification), or more than 5 years of experience
<b>Category III</b>	Associate Degree with more than 5 years of experience, or more than 10 years of experience
<b>Category IV</b>	Bachelor Degree, or Associate Degree with more than 10 years of experience, or more than 15 years of experience
<b>Category V</b>	Bachelor Degree with more than 5 years of experience, or Associate Degree with more than 15 years, or more than 20 years of experience



**Technician:**

**Designer** – Performs layouts, drafting and “light” independent design in support of engineering personnel. At higher levels, may specify equipment and perform supporting calculations.

**Electronic Technician** – Applies technical knowledge of electronics principles in determining equipment malfunctions, and applies skill in restoring equipment operations.

**Engineering Associate** – Applies conventional engineering practices to develop, prepare, or recommend schematics, designs, specification, electrical drawings and part lists. Examples of designs include: detailed circuit diagrams; hardware fittings or test equipment involving a variety of mechanisms; conventional piping systems; and building site layouts.

**Mechanical Technician** – Applies methods outlined by others to limited segments of research and development projects; assembles experimental or prototype models and hardware to meet engineering requirements.

**Test Assistant** – Conducts routine tests or experiments; records and evaluates data and reports findings. At higher levels, may plan approach and conduct various experiments; may arrange for fabrication of support equipment; may determine test procedures and design of special test equipment.

**Test Conductor** – Conducts tests or experiments requiring selection and adaptation or modification of test equipment and test procedures; sets up and may operate equipment; records data, measures and records problems that require resolution. Analyzes data and prepares test reports. At higher levels, may advise equipment users on redesign or solve unique operational deficiencies.

<b><u>Experience Levels</u></b>	<b><u>Recommended Education and Years of Work experience</u></b>
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<b>Category I</b>	High School
<b>Category II</b>	Associate Degree or more than 5 years of experience
<b>Category III</b>	Associate Degree with more than 5 years of experience or more than 10 years of experience
<b>Category IV</b>	Associate Degree with more than 10 years of experience or more than 20 years of experience
<b>Category V</b>	Associate Degree with more than 15 years of experience or more than 25 years of experience

**EXHIBIT K - LIST OF ACRONYMS**

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ANSI	American National Standards Institute
AR	Adequacy of Resources
ASQC	American Society for Quality Control, now ASQ (American Society for Quality)
CCR	Central Contractor Registration
CCS	Center Chief of Security
CFD	Computational Fluid Dynamics
CFR	Code of Federal Regulations
CFY	Current Fiscal Year
COB	Close of Business
CITMS	Center Information Technology Security Manager
CLIN	Contract Line Item Number
CMAR	Contractor Monthly Accident Report
CO	Contracting Officer
COTR	Contracting Officer's Technical Representative
DCAA	Defense Contract Audit Agency
DoD, DD	Department of Defense
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
eSRS	Electronic Subcontracting Reporting System
FAR	Federal Acquisition Regulation
FCCM	Federal Contract Compliance Manual
FIPS	Federal Information Processing Standard
FOB	Free on Board, Freight On Board
FTE	Full Time Equivalent
G&A	General and Administrative
GAA	Government Audit Agency
GAO	Government Accountability Office
IDIQ	Indefinite-Delivery Indefinite-Quantity
IPO	Industrial Property Officer
ISO	International Organization for Standardization
ISR	Individual Subcontracting Report
IT	Information Technology
LaRC	Langley Research Center
MO	Management and Operations
NAC	National Agency Check
NACI	National Agency Check with Inquiries
NAICS	North American Industry Classification System
NASA	National Aeronautics and Space Administration
NASA-STD	NASA Standard

NASIRC	NASA Incident Response Center
NESS	NF 1018 Electronic Submission System
NF	NASA Form
NFS	NASA FAR Supplement
NIST	National Institute of Standards and Technology
NPD	NASA Policy Directive
NPR	NASA Procedural Requirements
NSCCB	Network Security Configuration Control Board
NSSC	NASA Shared Services Center
OCI	Organizational Conflicts of Interest
ODC	Other Direct Cost(s)
ORCA	On-Line Representations and Certifications
PDF	Portable Document Format
PKI	Public Key Infrastructure
PPA	Pollution Prevention Act
PWS	Performance Work Statement
QASP	Quality Assurance Surveillance Plan
QMS	Quality Management System
RFP	Request For Proposal
SB	Small Business
SBA	Small Business Administration
SBU	Sensitive But Unclassified
SDB	Small Disadvantaged Business
SF	Standard Form
SIC	Standard Industrial Classification (replaced by NAICS)
SMAAART	Structures, Materials, Aerodynamics, Aerothermodynamics, and Acoustics Research and Technology
SP	Special Publication
SSA	Source Selection Authority
TBD	To Be Determined
URTA	Understanding the Requirements and Technical Approach
USC	United States Code
USDA	United States Department of Agriculture
US-CERT	United States Computer Emergency Readiness Team
VETS	Veterans' Employment & Training Service
VETS-100 (Report)	Federal Contractor Veterans' Employment (Report)
WD	Wage Determination
WOSB	Woman-Owned Small Business
WYE	Work Year Equivalent