CONTRACT NNL10AA14B
(Contract)

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

- Name, title, and signature of SGT person authorized to sign offer, Page 1
- Costs and fees, Section B.7, Page 8
- Subcontractor and monetary amounts in Clause H.16 "Small Disadvantaged Business Participation - Contract Targets," Page 27
- Key Personnel, Page 19
- Exhibit C - Schedule of Rates
- Exhibit D - Small Business Subcontracting Plan
- Exhibit F - LITES Contract Security Classification Specification (DD Form 254)

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 F2.d 765 (D.C. Cir. 1974).

SOLICITATION, OFFER AND AWARD

1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)	RATING	PAGE 1	OF PAGES 37

2. CONTRACT NUMBER	3. SOLICITATION NUMBER	4. TYPE OF SOLICITATION	5. DATE ISSUED	6. REQUISITION/PURCHASE NUMBER
NNL10AA14B	NNL10276610R	☐ SEALED BID (IFB) ☒ NEGOTIATED (RFP)	12/08/2009	TBD

7. ISSUED BY CODE	8. ADDRESS OFFER TO (If other than Item 7)
NASA Langley Research Center 9A Langley Boulevard Hampton, VA 23681-2199	NASA Langley Research Center, MS 144 Bid Distribution Office, 9A Langley Blvd., Bldg. 1195B, Room 124, Hampton, VA 23681-2199

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

SOLICITATION

9. Sealed offers in original and **8** copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in **9A Langley Blvd., Bldg. 1195B, Room 124** until **2 PM** local time **02/11/2010**
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See 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. TELEPHONE (NO COLLECT CALLS)			C. E-MAIL ADDRESS
	Robert J. Rice	AREA CODE 757	NUMBER 864	EXT. 2267	robert.j.rice@nasa.gov

11. TABLE OF CONTENTS

(X)	SEC.	DESCRIPTION	PAGE(S)	(X)	SEC.	DESCRIPTION	PAGE(S)
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X	C	DESCRIPTION/SPECS./WORK STATEMENT	9	X	J	LIST OF ATTACHMENTS	38
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OFFER (Must be fully completed by offeror)

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

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

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)	10 CALENDAR DAYS (%)	20 CALENDAR DAYS (%)	30 CALENDAR DAYS (%)	CALENDAR DAYS (%)

14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE
	Amendment 01	01/13/2010	Amendment 03	02/08/2010
	Amendment 02	01/19/2010		

		CODE 1DDX3	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)
15A. NAME AND ADDRESS OF OFFEROR	SGT, Inc. 7701 Greenbelt Road, Suite 400 Greenbelt, Maryland 20770	DUNS 878901396		████████

15B. TELEPHONE NUMBER			15C. CHECK IF REMITTANCE ADDRESS IS ☐ DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.	17. SIGNATURE	18. OFFER DATE
AREA CODE 301	NUMBER 486-3171	EXT.		████████	July 22, 2010

AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED 0001, 0002	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION PR: 4200351077 $10,000.00

22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: ☐ 10 U.S.C. 2304(c) ( ) ☐ 41 U.S.C. 253(c) ( )	23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM See Block 25.

24. ADMINISTERED BY (If other than Item 7) CODE	25. PAYMENT WILL BE MADE BY CODE
	NASA Shared Services Center Building 1111, C. Road Stennis Space Center, MS 39529-6000

26. NAME OF CONTRACTING OFFICER (Type or print) Rosemary C. Froehlich	27. UNITED STATES OF AMERICA *Rosemary C. Froehlich* (Signature of Contracting Officer)	28. AWARD DATE 8-10-10

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

AUTHORIZED FOR LOCAL REPRODUCTION
 Previous edition is unusable

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

NAME OF OFFEROR OR CONTRACTOR

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	LITES Phase-In. Phase-In is the period from the effective date of the contract to the contract performance start date.	1	LO	$0.00	$0.00
0002	The Contractor shall provide all resources (except as may be expressly stated in the contract as furnished by the Government) necessary to perform the requirements delineated in Section J, Exhibit A, Statement of Work, entitled "Langley Research Center (LaRC) Information Technology Enhanced Services (LITES)." The Government will order services under this CLIN by issuance of Cost-Plus-Incentive-Fee Task Orders, pursuant to Section H.3, Task Ordering Procedure (NFS 1852.216-80).	1	LO	NTE	$183,000,000.00

NSN 7540-01-152-8067

OPTIONAL FORM 336 (4-86)
Sponsored by GSA FAR (48 CFR) 53.110

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

B.1   SUPPLIES AND/OR SERVICES TO BE PROVIDED

The Contractor shall provide all resources (except as may be expressly stated in this contract as furnished by the Government) necessary to provide the requirements delineated in the Statement of Work (SOW), Section J, Exhibit A.

B.2   TARGET COST AND INCENTIVE FEE

The target cost and incentive fee for the contract is the sum of the cost and fee for all task orders issued under the contract.

Allocation of Incentive Fee

The Incentive Fee is allocated to the Cost and Performance Criteria as follows:

Cost Target Incentive Fee   25% of the total Incentive Fee

Performance Target Incentive Fee   75% of the total Incentive Fee

       IT Security Incidents   25% of the Performance Incentive Fee

       Back-up and Restoration   25% of the Performance Incentive Fee

       Customer Performance Evaluation   50% of the Performance Incentive Fee

Minimum and Maximum Cost Incentive Fee

The minimum cost incentive fee is 75% of the Cost Target Incentive Fee calculated in accordance with paragraph (e) of B.3 below.

The maximum cost incentive fee is 125% of the Cost Target Incentive Fee calculated in accordance with paragraph (e) of B.3 below.

The maximum target incentive fee percentage to be applied to the individual task orders is 6%.

B.3   INCENTIVE FEE (FAR 52.216-10) (MAR 1997)

(a) *General*. The Government shall pay the contractor for performing this contract a fee determined as provided in this contract.

(b) *Target cost and target fee*. The target cost and target fee specified in the Schedule are subject to adjustment if the contract is modified in accordance with paragraph (d) of this clause.

     (1) "Target cost," as used in this contract, means the estimated costs of this contract as initially negotiated, adjusted in accordance with paragraph (d) below.

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

(2) "Target fee," as used in this contract means the fee initially negotiated on the assumption that this contract would be performed for a cost equal to the estimated cost initially negotiated, adjusted in accordance with paragraph (d) of this clause.

NOTE: For incentive fee evaluation purposes, the target cost for each annual evaluation period is the sum of the target costs for all Task Orders completed during that period

(c) *Withholding of payment*. Normally, the Government shall pay the fee to the Contractor as specified in the Schedule. However, when the Contracting Officer considers that performance or cost indicates that the Contractor will not achieve target, the Government shall pay on the basis of an appropriate lesser fee. When the Contractor demonstrates that performance or cost clearly indicates that the Contractor will earn a fee significantly above the target fee, the Government may, at the sole discretion of the Contracting Officer, pay on the basis of an appropriate higher fee. After payment of 85 percent of the applicable fee, the Contracting Officer may withhold further payment of fee until a reserve is set aside in an amount that the Contracting Officer considers necessary to protect the Government's interest. This reserve shall not exceed 15 percent of the applicable fee or $100,000, whichever is less. The Contracting Officer shall release 75 percent of all fee withholds under this contract after receipt of the certified final indirect cost rate proposal covering the year of physical completion of this contract, provided the Contractor has satisfied all other contract terms and conditions, including the submission of the final patent and royalty reports, and is not delinquent in submitting final vouchers on prior years' settlements. The Contracting Officer may release up to 90 percent of the fee withholds under this contract based on the Contractor's past performance related to the submission and settlement of final indirect cost rate proposals.

(d) *Equitable adjustments*. When the work under this contract is increased or decreased by a modification to this contract or when any equitable adjustment in the target cost is authorized under any other clause, equitable adjustments in the target cost, target fee, minimum fee, and maximum fee, as appropriate, shall be stated in a supplemental agreement to this contract.

(e) Fee payable. (1) The fee payable under this contract shall be the target fee of $ See Paragraph B.2 that is earned under the criteria set forth in the Incentive Fee Plan at Clause B.4 below this clause. The cost incentive fee is increased by 20 cents for every dollar that the total allowable cost is less than the target cost (underruns), or is decreased by 20 cents for every dollar that the total allowable cost exceeds the target cost. In no event shall the fee be greater than the maximum cost incentive fee identified within B.2 or less than the minimum cost incentive fee identified within B.2.

(2)	The fee shall be subject to adjustment, to the extent provided in paragraph (d) of this clause, and within the minimum and maximum fee limitations in paragraph (e) (1) of this clause, when the total allowable cost is increased or decreased as a consequence of (i) payments made under assignments or (ii) claims excepted from the release as required by paragraph (h) (2) of the Allowable Cost and Payment clause.

(3)	If this contract is terminated in its entirety, the portion of the target fee payable shall not be subject to an increase or decrease as provided in this paragraph. The termination shall be accomplished in accordance with other applicable clauses of this contract.

(4)	For the purpose of fee adjustment, "total allowable cost" shall not include allowable costs

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

arising out of:

(i) Any of the clauses covered by the Excusable Delays clause to the extent that they are beyond the control and without the fault of negligence of the Contractor or any subcontractor;

(ii)   The taking effect, after negotiating the target cost, of a statute, court decision, written ruling, or regulation that results in the Contractor's being required to pay or bear the burden of any tax or duty or rate increase in a tax or duty;

(iii)   Any direct cost attributed to the Contractor's involvement in litigation as required by the Contracting Officer pursuant to a clause of this contract, including furnishing evidence and information requested pursuant to the Notice and Assistance Regarding Patent and Copyright Infringement clause;

(iv)   The purchase and maintenance of additional insurance not in the target cost and required by the Contracting Officer, or claims for reimbursement for liabilities to third persons pursuant to the Insurance Liability to Third Persons clause;

(v)   Any claim, loss, or damage resulting from a risk for which the Contractor has been relieved of liability by the Government Property clause; or

(vi)   Any claim, loss, or damage resulting from a risk defined in the contract as unusually hazardous or as a nuclear risk and against which the Government has expressly agreed to indemnify the Contractor.

(5)   All other allowable costs are included in "total allowable cost" for fee adjustment in accordance with this paragraph (e), unless otherwise specifically provided in this contract.

(f)   *Contract modification*. The total allowable cost and the adjusted fee determined as provided in this clause shall be evidenced by a modification to this contract signed by the Contractor and Contracting Officer.

(g)   *Inconsistencies*. In the event of any language inconsistencies between this clause and provisioning documents or Government options under this contract, compensation for spare parts or other supplies and services ordered under such documents shall be determined in accordance with this clause.

B.4   PERFORMANCE INCENTIVE

(a) A performance incentive applies to the services being delivered under this contract. The performance incentive will measure contractor performance against the performance criteria identified in paragraph (c) below. The Government will assess Contractor performance against the stated performance criteria on an annual basis over the 2 year base period and 3 one year option periods, if exercised. The performance incentive includes a standard performance level, a positive incentive, and a negative incentive, which are described in this clause. The term "exceeds" as used in this clause refers to performance that exceeds the standard performance level and the term "fails" refers to performance that does not meet the standard performance level.

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

(b) **Units of Measurement for Criteria 1 and 2**

Exceeds standard performance level: If the contractor exceeds the standard performance level for either the IT Security Incidents or the Back-up and Restoration criteria (paragraph (c)1 and (c) 2 below), the contractor shall earn 100% of the performance incentive fee allocated for each period for such criterion in B.2.

Meets standard performance level: If the contractor meets but does not exceed the standard performance level for either the IT Security Incidents or the Back-up and Restoration criteria (paragraph (c)1 and (c) 2 below), the contractor shall earn 40% of the performance incentive fee allocated to such criterion in B.2.

Fails standard performance level: If the contractor fails to meet the standard performance level for either the IT Security Incidents or the Back-up and Restoration criteria, the contractor shall earn 0% of the performance incentive fee allocated to such criterion in B.2.

(c) Performance Incentive Criteria*:*

1. Respond to IT security incidents and contain, mitigate, or pass to appropriate authority. (SOW Section 6.5.)

Performance Level:

Meets: The contractor meets the standard performance level by: (1) responding within 60 minutes (on average) of notification and (2) mitigating, containing, or passing to the appropriate authority each IT security incident within 24 consecutive hours (on average), and (3) submitting the proper documentation to close the Security Operations Center (SOC) Ticket within 2 business days after successful resolution of the incident.

Exceeds: The contractor exceeds the standard performance level by (1) responding in less than 30 minutes (on average) of notification and (2) mitigating, containing, or passing to the appropriate authority each IT security incident within 12 consecutive hours (on average), and (3) submitting the proper documentation to close the Security Operations Center (SOC) Ticket within 2 business days after successful resolution of the incident.

Fails: The contractor fails to achieve the "Meets" performance level defined above.

The following parameter is used for calculating response:

"Incident" is defined by NIST Special Publication 800-61 as a violation or imminent threat of violation of computer security policies, acceptable use policies or standard computer security practices.

2. Validation of back-up and restoration of applications and data sets. (Reference SOW 4.1.3(e).)

Performance Level:

Meets: The contractor meets the standard performance level if the contractor successfully

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

reconstitutes at least 98% of the requested restoration of systems' applications and data sets can be 100% reconstituted.

Exceeds: The contractor exceeds the standard performance level if the contractor successfully reconstitutes at least 99% or more of the requested restoration of systems' applications and data sets can be 100% reconstituted.

Fails: The contractor fails to achieve the "Meets" performance level defined above.

The following parameters are used for systems used for calculating restoration performance:

Systems and the schedules for those systems to be supported with back-up services and included in this category are identified in individual TO's.

Files modified since last scheduled incremental back-up are not factored into calculation. Statistics are based on actual restorations and annual disaster recovery testing.

3. Customer Performance Evaluation

Customer Performance Evaluation. This method consists of the Technical Monitors (TMs) annually evaluating performance for each Task Order on a 5-point scale. The evaluation has five specific areas that each Technical Monitor evaluates: overall task performance, quality, timeliness, responsiveness, and overall satisfaction with work performed. The customer evaluation ratings will be averaged to derive an overall rating. The contractor shall earn the percentage of the fee allocated to Customer Performance Evaluation in B.2 that corresponds to the average of customer evaluation ratings as set forth below, rounded to the tenth's digit:

Avg. Customer Evaluation Rating	Percentage of Customer Performance Evaluation Fee Earned
>4.9	100%
> 4.7	90%
> 4.5	75%
>3.5	40%
≤3.5	0%

B.5   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, shall be $10,000.00. There will be no further obligation on the part of the Government to issue additional task orders thereafter. The total maximum value is **$68M** for the two year potential period of performance.

B.6   SCHEDULE OF RATES FOR TASK ORDERS

(a)   The Contractor shall use the Schedule of Rates set forth in Section J, Exhibit C for:

    (1)   Establishing the target cost for Task Orders issued.

SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

(b)   Labor categories may be added during contract performance upon execution of a bilateral modification agreement provided the technical requirements warrant additions.

B.7   CONTRACT FUNDING (NFS 1852.232-81) (JUN 1990)

(a)   Phase-In costs: $█████

(b)   Task Orders:

    (1) For purposes of payment of cost, exclusive of fee, in accordance with FAR 52.232-22, "Limitation of Funds" clause, the total amount allotted by the Government is $████████ 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.

    (2) An additional amount of ████████ obligated for payment of fee.

(c)   The total amount allocated by the Government to this contract is **$10,000.00**.

[END OF SECTION]

SECTION C – DESCRIPTION/SPECIFICAITONS/STATEMENT OF WORK

C.1   SCOPE OF WORK

The Contractor shall provide all resources (except as may be expressly stated in the contract as furnished by the Government) necessary to perform the requirements delineated in Section J, Exhibit A, Statement of Work, entitled "Langley Research Center (LaRC) Information Technology Enhanced Services (LITES)."

[END OF SECTION]

SECTION E – INSPECTION AND ACCEPTANCE

E.1   LISTING OF CLAUSES INCORPORATED BY REFERENCE

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.

(1)   Federal Acquisition Regulation (48 CFR CHAPTER 1)

| 52.246-3 | MAY 2001 | INSPECTION OF SUPPLIES—COST-REIMBURSEMENT |
| 52.246-5 | APR 1984 | INSPECTION OF SERVICES—COST-REIMBURSEMENT |

(2)   NASA FAR Supplement (48 CFR CHAPTER 18)

CLAUSE
NUMBER   DATE   TITLE

None included by reference.

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

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

(a)   ANSI/ISO/ASQ Q9001-2000 Quality Management System (QMS) requirements

(b)   Capability Maturity Model Integration (CMMI®) for Development Capability Level 2 or higher

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

(NOTE: This clause applies only when the deliverable is other than a report.)

(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 an original copy 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 SECTION]

SECTION F – DELIVERIES OR PERFORMANCE

F.1   LISTING OF CLAUSES INCORPORATED BY REFERENCE

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)

(1)   Federal Acquisition Regulation (48 CFR CHAPTER 1)

CLAUSE
NUMBER   DATE   TITLE

| 52.242-15 | APR 1989 | STOP-WORK ORDER (ALTERNATE I) (AUG 1984) |
| 52.247-34 | NOV 1991 | F.O.B. DESTINATION |

(2)   NASA FAR Supplement (48 CFR CHAPTER 18)

CLAUSE
NUMBER   DATE   TITLE

None included by reference.

F.2   PERIOD OF PERFORMANCE

The period of performance of this contract is 24 months from the contract start date.

(End of clause)

F.3   PLACE OF DELIVERY

Delivery shall be f.o.b. destination to the NASA Langley Research Center, Hampton, VA 23681-2199, unless otherwise specified in task orders.

(End of clause)

F.4 PLACE(S) OF PERFORMANCE - SERVICES

The services to be performed under this contact shall be performed at the following location(s): NASA Langley Research Center, Hampton, VA; the Contractor's off-site facilities, or as otherwise specified in task orders.

F.5 DELIVERY REQUIREMENTS

The Contractor shall deliver the items required to be furnished by the Contract and Task Orders in accordance with Exhibit B, Contract Documentation Requirements.

[END OF SECTION]

SECTION G – CONTRACT ADMINISTRATION DATA

G.1   LISTING OF CLAUSES INCORPORATED BY REFERENCE

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)

 (1)   Federal Acquisition Regulation (48 CFR CHAPTER 1)

CLAUSE
NUMBER   DATE   TITLE

None included by reference.

(2)   NASA FAR Supplement (48 CFR CHAPTER 18)

CLAUSE
NUMBER   DATE   TITLE

1852.242-71	DEC 1988	TRAVEL OUTSIDE OF THE UNITED STATES

G.2   SUBMISSION OF VOUCHERS FOR PAYMENT (NFS 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 Management Division (FMD) Accounts Payable
Bldg 1111, C. Road
Stennis Space Center, MS 39529
FAX: 1-866-209-5415
Email: NSSC-AccountsPayable@nasa.gov

(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:

SECTION G – CONTRACT ADMINISTRATION DATA

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

    DCAA Regional Office **[Offerors: Please insert your appropriate DCAA mailing office address]**

(2) Three 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 be forwarded to:

    NASA/Shared Services Center
    Financial Management Division (FMD) Accounts Payable
    Bldg 1111, C. Road
    Stennis Space Center, MS 39529
    FAX: 1-866-209-5415
    Email: NSSC-AccountsPayable@nasa.gov

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

(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   PAYMENT OF FEES

(a) The Contractor will be evaluated annually for total Earned Cost and Performance Incentive Fees. The Contracting Officer and the Contracting Officer's Technical Representative will compute the fee amount based on the Contractor's performance in accordance with B.3 and B.4.

(b) The Government will advise the Contractor in writing of the fee computation. The Contractor is required to submit a separate voucher for earned fee in accordance with G.2.

(c) Fee that is not earned in a measurement period cannot be reallocated to future measurement periods and is forfeited.

SECTION G – CONTRACT ADMINISTRATION DATA

(d) Up to seventy five percent (75%) of the potential total incentive fee may be provisionally paid to the Contractor in monthly installments based upon the quality of performance and/or percentage of work completed as determined by the Contracting Officer. When the Contractor's demonstrated performance or cost clearly indicates that the Contractor will earn a lower fee, the Government may, at the sole discretion of the Contracting Officer, pay an appropriate lesser amount.

(e) All payment of incentive fee allocated to the cost criterion in B.2 for any contract year shall be considered provisional until the completion of the cost incurred audit by the cognizant Government Audit Agency for that year. Annual provisional payment of the fee allocated to the cost criterion in B.2 will be made based on actual costs reflected on the Monthly Financial Management Report, NASA Form 533. The contracting officer reserves the right to have such costs verified by the cognizant Government Audit Agency.

(f) In the event that the earned incentive fee is less than the provisional payments for the period, the overpayment shall be credited on the next cost voucher submitted. In the event that the incentive fee earned is more than the provisional payments, the Contractor may bill the difference between the incentive fee earned and the provisional fee payments made during each contract year by submitting a separate fee voucher.

(End of Clause)

G.4   DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (NFS 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
Office Code **TBD**
NASA Langley Research Center
Hampton, VA 23681-2199

Patent Representative:
Office of Chief Counsel
Office Code 212
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. Inquiries 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—Ownership by the Contractor" (based on DEC 2007 FAR Part 23 rewrite) 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   COMMERCIAL COMPUTER SOFTWARE – LICENSING (NFS 1852.227-86) (DEC 1987)

(a) Any delivered commercial computer software (including documentation thereof) developed at private expense and claimed as proprietary shall be subject to the restricted rights in paragraph (d) of this clause. Where the vendor/contractor proposes its standard commercial software license, those applicable portions thereof consistent with Federal laws, standard industry practices, the Federal Acquisition Regulations (FAR) and the NASA FAR Supplement, including the restricted rights in paragraph (d) of this clause, are incorporated into and made a part of this purchase order/contract.

(b) Although the vendor/contractor may not propose its standard commercial software license until after this purchase order/contract has been issued, or at or after the time the computer software is delivered, such license shall nevertheless be deemed incorporated into and made a part of this purchase order/contract under the same terms and conditions as in paragraph (a) of this clause. For purposes of receiving updates, correction notices, consultation, and similar activities on the computer software, the NASA Contracting Officer or the NASA Contracting Officer's Technical Representative/User may sign any agreement, license, or registration form or card and return it directly to the vendor/contractor; however, such signing shall not alter any of the terms and conditions of this clause.

(c) The vendor's/contractor's acceptance is expressly limited to the terms and conditions of this purchase order/contract. If the specified computer software is shipped or delivered to NASA, it shall be understood that the vendor/contractor has unconditionally accepted the terms and conditions set forth in this clause, and that such terms and conditions (including the incorporated license) constitute the entire agreement between the parties concerning rights in the computer software.

(d) The following restricted rights shall apply:

> (1) The commercial computer software may not be used, reproduced, or disclosed by the Government except as provided below or otherwise expressly stated in the purchase order/contract.

> (2) The commercial computer software may be -

>> (i) Used, or copied for use, in or with any computer owned or leased by, or on behalf of, the Government; provided, the software is not used, nor copied for use, in or with more than one computer simultaneously, unless otherwise permitted by the license incorporated under paragraphs (a) or (b) of this clause;

>> (ii) Reproduced for safekeeping (archives) or backup purposes;

>> (iii) Modified, adapted, or combined with other computer software, provided that the modified, combined, or adapted portions of the derivative software incorporating restricted computer software shall be subject to the same restricted

SECTION G – CONTRACT ADMINISTRATION DATA

rights; and

(iv) Disclosed and reproduced for use by Government contractors or their subcontractors in accordance with the restricted rights in subparagraphs (d) (2) (i), (ii), and (iii) of this clause; provided they have the Government's permission to use the computer software and have also agreed to protect the computer software from unauthorized use and disclosure.

(3) If the incorporated vendor's/contractor's software license contains provisions or rights that are less restrictive than the restricted rights in paragraph (d) (2) of this clause, then the less restrictive provisions or rights shall prevail.

(4) If the computer software is published, copyrighted computer software, it is licensed to the Government, without disclosure prohibitions, with the rights in paragraphs (d) (2) and (3) of this clause.

(5) The computer software may be marked with any appropriate proprietary notice that is consistent with the rights in paragraphs (d) (2), (3), and (4) of this clause.

(End of clause)

G.6   INSTALLATION-ACCOUNTABLE GOVERNMENT PROPERTY (ALT I) (DEVIATION) (NFS 1852.245-71) (SEP 2007)

   (a) The Government property described in paragraph (c) of this clause may be made available to the Contractor on a no-charge basis for use in performance of this contract. This property shall be utilized only within the physical confines of the NASA installation that provided the property unless authorized by the contracting officer under (b)(1)(iv). Under this clause, the Government retains accountability for, and title to, the property, and the Contractor shall comply with the following:

   NASA Procedural Requirements (NPR) 4100, NASA Materials Inventory Management Manual
   NASA Procedural Requirements (NPR) 4200, NASA Equipment Management Procedural
      Requirements
   NASA Procedural Requirement (NPR) 4300, NASA Personal Property Disposal Procedural
      Requirements

Property not recorded in NASA property systems must be managed in accordance with the requirements of FAR 52.245-1.

The Contractor shall establish and adhere to a system of written procedures to assure continued, effective management control and compliance with these user responsibilities. Such procedures must include holding employees liable, when appropriate, for loss, damage, or destruction of Government property.

   (b)(1) The official accountable recordkeeping, financial control, and reporting of the property subject to this clause shall be retained by the Government and accomplished within NASA management information systems prescribed by the installation Supply and Equipment Management Officer (SEMO) and Financial Management Officer. If this contract provides for the Contractor to acquire property, title to which will vest in the Government, the following additional procedures apply:

SECTION G – CONTRACT ADMINISTRATION DATA

(i) The Contractor shall not utilize the installation's central receiving facility for receipt of contractor-acquired property. However, the Contractor shall provide listings suitable for establishing accountable records of all such property received, on a monthly basis, to the SEMO.

(ii) The Contractor shall establish a record of the property as required by FAR 52.245-1, Government Property, and furnish to the Industrial Property Officer a DD Form 1149, Requisition and Invoice/Shipping Document, (or installation equivalent) to transfer accountability to the Government within 5 working days after receipt of the property by the Contractor. The Contractor is accountable for all contractor-acquired property until the property is transferred to the Government's accountability.

(iii) Contractor use of Government property at an off-site location and off-site subcontractor use require advance approval of the Contracting Officer and notification of the Industrial Property Officer. The property shall be considered Government furnished and the Contractor shall assume accountability and financial reporting responsibility. The Contractor shall establish records and property control procedures and maintain the property in accordance with the requirements of FAR 52.245-1, Government Property, until its return to the installation. NASA Procedural Requirements related to property loans shall not apply to offsite use of property by contractors.

(2) After transfer of accountability to the Government, the Contractor shall continue to maintain such internal records as are necessary to execute the user responsibilities identified in paragraph (a) of this clause and document the acquisition, billing, and disposition of the property. These records and supporting documentation shall be made available, upon request, to the SEMO and any other authorized representatives of the Contracting Officer.

(c) The following property and services are provided if checked.

  _X_ (1) Office space, work area space, and utilities. Government telephones are available for official purposes only.

  _X_ (2) Office furniture.

  _X_ (3) Property listed in individual task orders

(ii) If the Contractor acquires property, title to which vests in the Government pursuant to other provisions of this contract, this property also shall become accountable to the Government upon its entry into Government records.

(iii) The Contractor shall not bring to the installation for use under this contract any property owned or leased by the Contractor, or other property that the Contractor is accountable for under any other Government contract, without the Contracting Officer's prior written approval.

  ___ (4) Supplies from stores stock.

  _X_ (5) Publications and blank forms stocked by the installation.

  _X_ (6) Safety and fire protection for Contractor personnel and facilities.

  ___ (7) Installation service facilities: _None_ .

  _X_ (8) Medical treatment of a first-aid nature for Contractor personnel injuries or illnesses sustained during on-site duty.

  _X_ (9) Cafeteria privileges for Contractor employees during normal operating hours.

  _X_ (10) Building maintenance for facilities occupied by Contractor personnel.

  ___ (11) Moving and hauling for office moves, movement of large equipment, and delivery of supplies. Moving services may be provided on-site, as approved by the Contracting Officer.

(End of clause)

SECTION G – CONTRACT ADMINISTRATION DATA

G.7 GOVERNMENT PROVIDED INFORMATION TECHNOLOGY (IT) SERVICES

An Agency Mission Focus Review (MFR) chartered by NASA for the purpose of looking broadly across the Agency and identifying opportunities to redeploy resources to more directly support the NASA missions has resulted in an Agency mandate (MFR 137) to:

1) Provide contract required IT services as "Government Provided Services"; and
2) Require all IT services to be acquired from the existing NASA Outsourcing Desktop Initiative (ODIN) Contractor or successor contract(s).

The objective of the MFR 137 will allow consistency throughout the Agency, improve Agency IT security, achieve economies of scale, and improve NASA's ability to manage hardware and software desktop standards. This will result in Agency IT that is better protected and allow the Agency to readily identify and appropriately and quickly respond to vulnerabilities.

The Government shall provide Information Technology (IT) services in line with MFR 137, as required, for the performance of this contract. As part of task order proposals submitted to the Government, the contractor shall identify all IT requirements necessary for the performance of the contract. The Government will furnish computers and related IT services that will be connected to the LaRC network and utilized for work performed on-site at LaRC through ODIN or successor contract(s).

If the Contractor determines that ODIN or successor contract(s) can not provide all or any part of the required services, the Contractor shall document the reasons and submit a request for a waiver to acquire the services from a vendor other than ODIN or successor contract(s). The justification must describe the type of hardware, software, or service needed and the need for the waiver. The Contractor shall submit the waiver through the Contracting Officer's Technical Representative (COTR) to the LaRC Office of Chief Information Officer (OCIO) for review and approval.

This clause covers all on-site Contractor employees and includes all desktops, laptops, workstations, and cell phones and PDA's which are connected to the NASA networks. The term "workstations" includes computers and services that provide general purpose computing in support of Center and Agency activities. These workstations support general-purpose business and scientific/engineering functions, including system administration, standard office automation and desktop productivity enhancement software. Items such as the CPU, monitor, keyboard, memory, mouse, USB thumb drive, and docking station are included in the workstation definition.

(End of clause)

[END OF SECTION]

SECTION H – SPECIAL CONTRACT REQUIREMENTS

H.1 SECURITY CLASSIFICATION REQUIREMENTS (NFS 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 TOP SECRET. See FAR Clause 52.204-2 of the contract and Exhibit F, DD Form 254, Department of Defense Contract Security Classification Specification.

(End of clause)

H.2 KEY PERSONNEL AND FACILITIES (NFS 1852.235-71) (MARCH 1989)

(a) The personnel and/or facilities listed below (or specified in the contract Schedule) are considered essential to the work being performed under this contract. Before removing, replacing, or diverting any of the listed or specified personnel or facilities, the Contractor shall (1) notify the Contracting Officer reasonably in advance and (2) submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on this contract. (b) The Contractor shall make no diversion without the Contracting Officer's written consent; provided, that the Contracting Officer may ratify in writing the proposed change, and that ratification shall constitute the Contracting Officer's consent required by this clause. (c) The list of personnel and/or facilities shown below may, with the consent of the contracting parties, be amended from time to time during the course of the contract to add or delete personnel and/or facilities.

Program Manager

██████████████ -

(End of clause)

H.3 TASK ORDERING PROCEDURE (NFS 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) The Contractor shall provide IT services in response to task orders issued by the Government. Task order request for proposals will be initiated by a NASA civil servant who will assume the responsibilities of the Technical Monitor (TM). The Contracting Officer and the Contracting Officer's Technical Representative (COTR) will concur in each Task order request for proposal.

(c) A task order request for proposal issued by the Contracting Officer shall provide the Contractor with the following data in the Electronic Task Order System:

Date of Initiation;
Task Number, Title, Technical Monitor (TM), Org Code, Org Resource Manager;

SECTION H – SPECIAL CONTRACT REQUIREMENTS

Objective and Background Information;

Requirement for Task specific Organizational Conflict of Interest (OCI) Plan, if applicable;

Description of work to be performed:

    Contractor tasks (some TO's contain subtasks for tracking and reporting purposes);

Software Class;

Technical performance standards and metrics;

Documentation requirements;

Deliverables;

Inventory of equipment and software, including IT Security Plan number and Computer Security Official, availability of system requirements, and back-up requirements;

Reporting Requirements;

Government Furnished Property/Services;

Required milestones, delivery dates, and period of performance;

Required delivery date for the Task Plan (if other than 2 weeks);

Acceptance criteria, if applicable.

(d) Within 2 weeks (or as specified in the task order request), the Contractor shall deliver an electronic task plan conforming to the request which outlines the Contractor's technical approach, staffing, and cost estimate for the performance of the task.

(e) After review and any necessary discussions, the Contracting Officer may issue a task order to the Contractor containing, as applicable, the above information as well as the following:

    (1) Date of the order.

    (2) Contract number and order number.

    (3) Maximum dollar amount authorized (cost and fee).

    (4) Funding.

(f) The Contracting Officer may amend tasks in the same manner in which they were issued. In the case where the task order requires changes/modifications, the Government and Contractor shall arrive at a general agreement to the changes.

Changes shall follow the same approval process as the original task order and shall be approved by the Contracting Officer.

(g) In the case of work which the contractor views as outside the scope of the LITES contract, the Contractor shall notify the Contracting Officer in writing within 2 business days and shall not proceed with any work.

(h) 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.

SECTION H – SPECIAL CONTRACT REQUIREMENTS

(i) 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   SECURITY PROGRAM/NON-U.S. CITIZEN EMPLOYEE ACCESS REQUIREMENTS (LaRC 52.204-91) (FEB 2007)

Access to the LaRC by non-U.S. citizen employees, including those in permanent resident alien status, shall be approved in accordance with NPR 1371.2A, "Requirements for Processing Requests for Access to NASA Installations or Facilities by Foreign Nationals or U.S. Citizens Who are Representatives of Foreign Entities". Processing requires advance notice of a minimum of 20 days depending on the nationality of the non-U.S. citizen or foreign representative. Access authorization shall be for a maximum of one year and must be re-evaluated annually. Non-U.S. citizen employees or foreign representatives must be under escort at all times while on Center (by a NASA Civil Servant or permanently badged contractor) unless otherwise approved by the International Visitors Coordinator (IVC).

(End of clause)

H.5   OBSERVATION OF REGULATIONS AND INDENTIFICATION OF CONTRACTOR'S EMPLOYEES (LaRC 52.211-104) (FEB 2007)

(a) Observation of Regulations--In performance of that part of the TO work which may be performed at Langley Research Center (LaRC) or other Government installation, the Contractor shall require its employees to observe the rules and regulations as prescribed by the authorities at LaRC or other installation including all applicable Federal, NASA and Langley safety, health, environmental and security regulations.

(b) Identification Credentials--At all times while on LaRC property, the Contractor shall require its employees, subcontractors and agents to wear credentials issued by NASA LaRC. Contractors will be held accountable for these credentials, and may be required to validate its active employees on an annual basis with the NASA LaRC Security Office. Immediately upon employee termination or TO completion, badges shall be returned to the NASA LaRC Badge and Pass Office. It is agreed and understood that all NASA identification badges remain the property of NASA and the Government reserves the right to invalidate such badges at any time.

(c) Employee Out Processing--The Contractor shall ensure that all employees who are terminated or no longer connected with work being performed under this contract are out processed through the LaRC Badge and Pass Office. Badges and keys must be accounted for and returned.

(End of clause)

H.6   OPTIONS (LaRC 52.217-95) (APR 2002)

Pursuant to the clause 52.217-9, Option to Extend the Term of the Contract, the Contractor hereby grants to the Government options to extend the term of the contract for 3 additional periods of 12 months each. Such option(s) are to be exercisable by issuance of a unilateral

SECTION H – SPECIAL CONTRACT REQUIREMENTS

modification. Upon exercise of such option(s) by the Government, the following items will be increased by the amount specified below for each option period.   The contractor's performance will be a key factor in making the determination on whether or not to exercise the option.

Item	Maximum IDIQ Contract Value (B.5)	Period of Performance (F.2)
First Option Period	$36.5M	12 Months
Second Option Period	$38M	12 Months
Third Option Period	$40.5M	12 Months

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Deleted:

 (End of clause)

H.7   ORGANIZATIONAL CONFLICTS OF INTEREST

(a) Definitions. As used in this clause—

"Contractor" means the total contractor organization, including not only the business unit or segment that signs the contract, but also all divisions, subsidiaries, and affiliates.

 "Organizational conflict of interest" means a situation in which the organization itself, its other divisions, or affiliated companies can be afforded some form of benefit or unfair advantage by virtue of contract performance. Factors may create a conflict in an instant contract; or the nature of the work to be performed on the instant contract may create a conflict for a future acquisition.   Organizational conflicts of interest may be based upon impaired objectivity, unfair access to data, or biased ground rules.

(b)   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.

(c)   In general, during the performance of tasks under this contract, the Contractor may encounter conflicts resulting from unequal access to data; setting the ground rules for future competitions; and performing evaluations and assessments of the work, proposals, or performance of others or itself. More specifically, the Contracting Officer has determined that the contractor will have access to sensitive data by virtue of performing task orders under the resultant contract. For example, the contractor will have access to unencrypted data on the systems for which it provides systems administration and the contractor will have access to sensitive information from which it will generate information to enable others to perform engineering analyses

(d)   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

(e)   Government Response to a Report of a Potential Conflict: The Contracting Officer shall

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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 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 will ensure that sensitive information provided to or generated by the subcontractor team performing the task order will not be transmitted to any prime or subcontractor employees who are not also performing the task order. Further, the subcontractor will not release any information regarding the task order to anyone but Government personnel identified by the Contracting Officer as proper recipients of the information. This subcontract arrangement will not obviate the Contractor's responsibility for acceptable technical performance of the Task Order.

(f)   Additional requirements:

(1) *Limitations on future contracting.* If work required by task orders under this contract results in deliverables that lead directly, predictably and without delay to statements of work or specifications for a Government competitive solicitation, a limitation of future contracting shall apply as set forth in the Section H. clause, NFS 1852.209-71, Limitation of Future Contracting.

(2) *Limitation on Reassignments*. This clause prohibits the contractor from reassigning personnel who work on a task order under this contract to work on proposal efforts for Government competitive procurements that the task order under this contract supported.   The limitation on assignment of personnel shall remain until such time as the supported NASA contract is finally awarded.

(3) The Contractor shall include this clause in all subcontract(s) regardless of tier.

 (g) Breach.   Any breach of the above restrictions and any nondisclosure or misrepresentation of any relevant facts required regarding organizational conflicts of interests to be disclosed may result in—

(1) Termination of this contract for default;

(2) Disqualification of the contractor for subsequent contractual efforts; or

(3) Other remedies as may be available under law or regulation.

H.8   ACCESS TO SENSITIVE INFORMATION (NFS 1852.237-72) (JUNE 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

SECTION H – SPECIAL CONTRACT REQUIREMENTS

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 another 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)

H.9   LIMITATION OF FUTURE CONTRACTING (NFS 1852.209-71) (DEC 1988)

(a) The Contracting Officer has determined that this acquisition may give rise to potential organizational conflicts 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 described in the Section H clause, Organizational Conflicts of Interest. In addition to the description of the "Unfair Access to Information" type OCI within that clause, there is also some potential under tasks that may be awarded under this contract for the contractor to provide material that will lead directly, predictably and without delay to a statement of work for a NASA procurement.

SECTION H – SPECIAL CONTRACT REQUIREMENTS

(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 any 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 as long as these data remain proprietary or confidential, the Contractor shall protect these data from unauthorized use and disclosure and agrees not to use them to compete with those other companies.

(End of clause)

H.10   RESERVED

H.11   ISO 9001:2000 CERTIFICATION/REGISTRATION REQUIREMENTS QUALITY MANAGEMENT SYSTEM (LaRC 52.246-99) (NOV 2002)

The Contractor's quality system shall be Certified/Registered to the latest ANSI/ISO/ASQC Q ISO 9001 standard, Quality Management Systems Requirements, at all times during the period of performance of this contract.

The Government reserves the right 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 3rd party ISO 9001 Registrar and found to meet the requirements given in the above-cited International Standard.

(End of clause)

H.12   RESERVED

H.13   CAPABILITY MATURITY MODEL INTEGRATION (CMMI®) REQUIREMENTS

The Contractor (including teaming partners/subcontractors) that will be performing software engineering shall be CMMI®- for Development Capability Level 2 or higher as measured by a Software Engineering Institute (SEI) authorized lead appraiser from an external organization in the following Process Areas:

(a) Requirements Management
(b) Configuration Management
(c) Process and Product Quality Assurance
(d) Measurement and Analysis

SECTION H – SPECIAL CONTRACT REQUIREMENTS

    (e) Project Planning
    (f) Project Monitoring and Control
    (g) Supplier Agreement Management

The Contractor shall submit to the Contracting Officer the results of its successfully completed Standard CMMI® Appraisal Method for Process Improvement (SCAMPI) Class A appraisals against the CMMI® for Development Capability Level 2 or higher.

The Contractor shall maintain or upgrade its CMMI® for Development Capability Level 2 or higher rating for the term of the contract and perform software engineering in accordance with the process areas appraised at CMMI® for Development Capability Level 2 or higher.

The Government reserves the right to audit the Contractor's CMMI processes at any time.

(End of clause)

H.14   ADDITIONAL DATA PROVISIONS PERTAINING TO COMMERCIAL COMPUTER SOFTWARE

All commercial computer software delivered to NASA under this contract shall be governed by NASA FAR Supplement Clause 1852.227-86. Further, the Contractor shall affix a notice substantially as follows to any commercial computer software delivered under this contract: Notice-Notwithstanding any other lease or license agreement that may pertain to, or accompany the delivery of, this computer software, the rights of the Government regarding its use, reproduction and disclosure are as set forth in Government Contract No. To Be Determined at Contract Award. The Contractor shall obtain from its subcontractors/third party vendors all software and rights therein necessary to fulfill the Contractor's obligations to the Government under this clause and NASA FAR Supplement Clause 1852.227-86. If a subcontractor/third party vendor refuses to accept terms affording the Government those rights, the Contractor shall promptly notify the Contracting Officer of the refusal and shall not proceed with the subcontract award/vendor purchase without authorization in writing from the Contracting Officer.

H.15 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.16 SMALL DISADVANTAGED BUSINESS PARTICIPATION-CONTRACT TARGETS (OFFEROR FILL IN)

(This clause applies to all Offerors including small disadvantaged businesses (SDBs).)

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

Targets for this contract are as follows:

SECTION H – SPECIAL CONTRACT REQUIREMENTS

Base Period (24 Months)	*NAICS Industry Subsectors	Dollar Target	Percent of Contract Value
1st Option	███████████████	$██████	████
2nd Option	██████████	█████	███
3rd Option	██████████	█████	███
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(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:

Contract Period	*NAICS Industry Subsectors	Dollar Target	Percent of Contract Value
Base Period (24 Months)	N/A		
1st Option			
2nd Option			
3rd Option			
Total			

(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)

CLAUSE NUMBER	CLAUSE TITLE
52.202-1	DEFINITIONS (JUL 2004)
52.203-3	GRATUITIES (APR 1984)
52.203-5	COVENANT AGAINST CONTINGENT FEES (APR 1984)
52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (SEP 2006)
52.203-7	ANTI-KICKBACK PROCEDURES (JUL 1995)
52.203-8	CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)
52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)
52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (SEP 2007)
52.203-13	CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT (DEC 2008)
52.204-2	SECURITY REQUIREMENTS (AUG 1996)
52.204-4	PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)
52.204-7	CENTRAL CONTRACTOR REGISTRATION (APR 2008)
52.204-9	PERSONAL IDENTITY VERIFICATION OF CONTRACTOR PERSONNEL (SEP 2007)
52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (SEP 2006)
52.215-2	AUDIT AND RECORDS - NEGOTIATION (JUN 1999)
52.215-8	ORDER OF PRECEDENCE - UNIFORM CONTRACT FORMAT (OCT 1997)
52.215-11	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA - MODIFICATIONS (OCT 1997)
52.215-13	SUBCONTRACTOR COST OR PRICING DATA - MODIFICATIONS (OCT 1997)
52.215-15	PENSION ADJUSTMENTS AND ASSET REVERSIONS (OCT 2004)
52.215-17	WAIVER OF FACILITIES CAPITAL COST OF MONEY (OCT 1997)
52.215-18	REVERSION OR ADJUSTMENT OF PLANS FOR POSTRETIREMENT BENEFITS (PRB) OTHER THAN PENSIONS (JUL 2005)
52.215-19	NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)
52.215-22	LIMITATIONS ON PASS-THROUGH CHARGES – IDENTIFICATION OF SUBCONTRACTING EFFORT (OCT 2009)

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52.215-23	LIMITATIONS ON PASS-THROUGH CHARGES (OCT 2009)
52.216-7	Allowable Cost and Payment (DEC 2002) Fill in: (a)(3) 30th
52.216-18	ORDERING (OCT 1995) Fill in: (a) contract effective date through the end of the contract period of performance.
52.216-19	ORDER LIMITATIONS (OCT 1995) Fill in: (a) $1,000.00; (b)(1) $10M; (b)(2) $10M, (b)(3) 14; (d) 3 calendar days
52.216-22	INDEFINITE QUANTITY (OCT 1995) Fill in: "12 months from the end of the contract period of performance" in paragraph (d)
52.217-8	OPTION TO EXTEND SERVICES (NOV 1999)
52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2004)
52.219-9	SMALL BUSINESS SUBCONTRACTING PLAN (APR 2008) - ALTERNATE II (OCT 2001)
52.219-16	LIQUIDATED DAMAGES - SUBCONTRACTING PLAN (JAN 1999)
52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)
52.222-2	PAYMENT FOR OVERTIME PREMIUMS (JUL 1990) Fill in: "zero" in paragraph (a)
52.222-3	CONVICT LABOR (JUN 2003)
52.222-21	PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)
52.222-26	EQUAL OPPORTUNITY (MAR 2007)
52.222-35	EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (SEP 2006)
52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)
52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (SEP 2006)
52.222-39	NOTIFICATION OF EMPLOYEE RIGHTS CONCERNING PAYMENT OF UNION DUES OR FEES (DEC 2004)
52.222-50	COMBATING TRAFFICKING IN PERSONS (FEB 2009)
52.222-54	EMPLOYMENT ELIGIBILITY VERIFICATION (JAN 2009)
52.223-5	POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION (AUG 2003) (ALT I) (AUG 2003) AND (ALT II) (AUG 2003)
52.223-6	DRUG-FREE WORKPLACE (MAY 2001)
52.223-10	WASTE REDUCTION PROGRAM (AUG 2000)
52.223-14	TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)
52.223-15	ENERGY EFFICIENCY IN ENERGY-CONSUMING PRODUCTS (DEC 2007)
52.223-16	IEEE 1680 STANDARD FOR THE ENVIRONMENTAL ASSESSMENT OF PERSONAL COMPUTER PRODUCTS (DEC 2007)
52.223-17	AFFIRMATIVE PROCUREMENT OF EPA-DESIGNATED ITEMS IN SERVICES AND CONSTRUCTION CONTRACTS (MAY 2008)
52.224-1	PRIVACY ACT NOTIFICATION (APR 1984)
52.224-2	PRIVACY ACT (APR 1984)
52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUN 2008)
52.227-1	AUTHORIZATION AND CONSENT (DEC 2007)
52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (DEC 2007)
52.227-3	PATENT INDEMNITY (APR 1984)

52.227-11	**PATENT RIGHTS--OWNERSHIP BY THE CONTRACTOR (DEC 2007) AS MODIFIED BY NFS 1852.227-11 (**Fill in: (j) Communications. Patent Representative, Office of Chief Counsel NASA Langley Research Center Hampton, VA 23681-2199
52.227-14	**RIGHTS IN DATA—GENERAL (DEC 2007)**, ALTERNATE II (DEC 2007), and (ALTERNATE III (DEC 2007) AS MODIFIED BY 1852.227-14 NASA FAR SUPPLEMENT (added to subparagraph 4 of paragraph (d)). NOTE: FAR 52.227-14 (no alternate) applies unless an alternate version is included in a particular task order issued under this contract.
52.227-16	**ADDITIONAL DATA REQUIREMENTS (JUN 1987)**
52.227-23	**RIGHTS TO PROPOSAL DATA (TECHNICAL) (JUN 1987)**
52.228-7	**INSURANCE - LIABILITY TO THIRD PERSONS (MAR 1996)**
52.230-2	**COST ACCOUNTING STANDARDS (OCT 2008)**
52.230-6	**ADMINISTRATION OF COST ACCOUNTING STANDARDS (MAR 2008)**
52.232-9	**LIMITATION ON WITHHOLDING OF PAYMENTS (APR 1984)**
52.232-17	**INTEREST (OCT 2008)**
52.232-22	**LIMITATION OF FUNDS (APR 1984)**
52.232-23	**ASSIGNMENT OF CLAIMS (JAN 1986)**
52.232-25	**PROMPT PAYMENT (OCT 2008)**
52.232-34	**PAYMENT BY ELECTRONIC FUNDS TRANSFER - OTHER THAN CENTRAL CONTRACTOR REGISTRATION (MAY 1999)** Fill in: (b)(1) no later than 15 days prior to submission of the first request for payment
52.233-1	**DISPUTES (JUL 2002) - ALTERNATE I (DEC 1991)**
52.233-3	**PROTEST AFTER AWARD (AUG 1996) - ALTERNATE I (JUN 1985)**
52.233-4	**APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)**
52.237-2	**PROTECTION OF GOVERNMENT BUILDINGS, EQUIPMENT, AND VEGETATION (APR 1984)**
52.237-3	**CONTINUITY OF SERVICES (JAN 1991)**
52.239-1	**PRIVACY OR SECURITY SAFEGUARDS (AUG 1996)**
52.242-1	**NOTICE OF INTENT TO DISALLOW COSTS (APR 1984)**
52.242-3	**PENALTIES FOR UNALLOWABLE COSTS (MAY 2001)**
52.242-4	**CERTIFICATION OF FINAL INDIRECT COSTS (JAN 1997)**
52.242-13	**BANKRUPTCY (JUL 1995)**
52.243-2	**CHANGES - COST-REIMBURSEMENT. (AUG 1987) - ALTERNATE II (APR 1984)**
52.244-2	**SUBCONTRACTS – ALTERNATE I (JUN 2007)** fill in: (d) to be completed by Government at time of award, (j) to be completed by Government at time of award
52.244-5	**COMPETITION IN SUBCONTRACTING (DEC 1996)**
52.245-1	**GOVERNMENT PROPERTY (JUN 2007)**
52.245-9	**USE AND CHARGES (JUN 2007)**
52.249-6	**TERMINATION (COST-REIMBURSEMENT) (MAY 2004)**
52.249-14	**EXCUSABLE DELAYS (APR 1984)**
52.253-1	**COMPUTER GENERATED FORMS (JAN 1991)**

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II.   NASA FAR Supplement (48 CFR CHAPTER 18)

CLAUSE NUMBER	CLAUSE TITLE
1852.203-70	**DISPLAY OF INSPECTOR HOTLINE POSTERS (JUN 2001)**
1852.208-81	**RESTRICTIONS ON PRINTING AND DUPLICATING (NOV 2004)**
1852.216-89	**ASSIGNMENT AND RELEASE FORMS (JUL 1997)**
1852.219-74	**USE OF RURAL AREA SMALL BUSINESSES (SEP 1990)**
1852.219-75	**SMALL BUSINESS SUBCONTRACTING REPORTING (MAY 1999)**
1852.219-76	**NASA 8 PERCENT GOAL (JUL 1997)**
1852.223-70	**SAFETY AND HEALTH (APR 2002)**
1852.223-74	**DRUG AND ALCOHOL-FREE WORKFORCE (MAR 1996)**
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, Hampton, VA
1852.227-70	**NEW TECHNOLOGY (MAY 2002)**
1852.227-71	**REQUESTS FOR WAIVER OF RIGHTS TO INVENTIONS (APR 1984)**
1852.228-75	**MINIMUM INSURANCE COVERAGE (OCT 1988)**
1852.237-70	**EMERGENCY EVACUATION PROCEDURES (DEC 1988)**
1852.242-70	**TECHNICAL DIRECTION (SEP 1993)**
1852.242-72	**OBSERVANCE OF LEGAL HOLIDAYS (AUG 1992) ALT I (SEP 1989) AND ALT II (OCT 2000)**
1852.242-73	**NASA CONTRACTOR FINANCIAL MANAGEMENT REPORTING (NOV 2004)**
1852.243-71	**SHARED SAVINGS (MAR 1997)**
1852.245-70	**CONTRACTOR REQUESTS FOR GOVERNMENT-PROVIDED PROPERTY (DEVIATION) (SEP 2007)**
1852.245-74	**IDENTIFICATION AND MARKING OF GOVERNMENT PROPERTY (DEVIATION) (SEP 2007)**
1852.245-75	**PROPERTY MANAGEMENT CHANGES (DEVIATION) (SEP 2007)**
1852.245-78	**PHYSICAL INVENTORY OF CAPITAL PERSONAL PROPERTY (DEVIATION) (SEP 2007)**
1852.245-82	**OCCUPANCY MANAGEMENT REQUIREMENTS (DEVIATION) (SEP 2007)**

I.2   OPTION TO EXTEND THE TERM OF THE CONTRACT (FAR 52.217-9) (MAR 2000)

(a) The Government may extend the term of this contract by written notice to the Contractor within the base period; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.
(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.
(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 5 years.
(End of Clause)

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**I.3   SMALL DISADVANTAGED BUSINESS PARTICIPATION PROGRAM-
          DISADVANTAGED STATUS AND REPORTING (FAR 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.4   CLAUSES INCORPORATED BY REFERENCE (FAR 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.5   AUTHORIZED DEVIATIONS IN CLAUSES (FAR 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.6   SECURITY REQUIREMENTS FOR UNCLASSIFIED INFORMATION TECHNOLOGY RESOURCES (NFS 1852.204-76)(SEP 2009) (DEVIATION)

(a) The contractor shall protect the confidentiality, integrity, and availability of NASA Electronic Information and IT resources and protect NASA Electronic Information from unauthorized disclosure.

(b) This clause is applicable to all NASA contractors and sub-contractors that process, manage, access, or store unclassified electronic information, to include Sensitive But Unclassified (SBU) information, for NASA in support of NASA's missions, programs, projects and/or institutional requirements. Applicable requirements, regulations, policies, and guidelines are identified in the Applicable Documents List (ADL) provided as an attachment to the contract. The documents listed in the ADL can be found at: www.nasa.gov/offices/ocio/itsecurity/index.html. For policy information considered sensitive, the documents will be identified as such in the ADL and made available through the Contracting Officer.

(c) Definitions
   (1) IT resources means any hardware or software or interconnected system or subsystem of equipment, that is used to process, manage, access, or store electronic information.
   (2) NASA Electronic Information is any data (as defined in the Rights in Data clause of this contract) or information (including information incidental to contract administration, such as financial, administrative, cost or pricing, or management information) that is processed, managed, accessed or stored on an IT system(s) in the performance of a NASA contract.
   (3) IT Security Management Plan -- This plan shall describe the processes and procedures that will be followed to ensure appropriate security of IT resources that are developed, processed, or used under this contract.
   (4) IT Security Plan – this is a FISMA requirement; see the ADL for applicable requirements.

Within 30 days after contract start date, the contractor shall develop and deliver an IT Security Management Plan.   The delivery address and approval authority will be included in the ADL. All contractor personnel requiring physical or logical access to NASA IT resources must

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complete NASA's annual IT Security Awareness training. Refer to the IT Training policy located in the IT Security website at https://itsecurity.nasa.gov/policies/index.html.

(d) The contractor shall afford Government 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 a program of IT inspection (to include vulnerability testing), investigation and audit to safeguard against threats and hazards to the integrity, availability, and confidentiality of NASA Electronic Information or to the function of IT systems operated on behalf of NASA, and to preserve evidence of computer crime.

(e) 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 in accordance with retention documentation available in the ADL. The contractor shall provide a listing of all NASA Electronic information and IT resources generated in performance of the contract. At that time, the contractor shall request disposition instructions from the Contracting Officer. The Contracting Officer will provide disposition instructions within 30 calendar days of the contractor's request..

(f) The Contracting Officer may waive specific requirements of this clause upon request of the contractor. The contractor shall provide all relevant information requested by the Contracting Officer to support the waiver request.

(g) The contractor shall insert this clause, including this paragraph in all subcontracts that process, manage, access or store NASA Electronic Information in support of the mission of the Agency.

(End of Clause)

I.7   OMBUDSMAN (NFS 1852.215-84) (OCT 2003) ALTERNATE (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)864-8541. 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. 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.

(End of clause)

I.8   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 [*insert page numbers or other identification of pages*]. 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]

SECTION J – EXHIBITS AND ATTACHMENTS

J.1 LIST OF EXHIBITS AND ATTACHMENTS

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

Exhibit	DESCRIPTION
A	Statement of Work
B	Contract Documentation Requirements
C	Schedule of Rates
D	Small Business Subcontracting Plan
E	Personal Identity Verification (PIV) Card Issuance Procedures
F	DD Form 254, Department of Defense Contract Security Classification Specification
G	Quality Assurance Surveillance Plan – To be incorporated after Contract Award
H	Safety and Health Plan
I	LITES Labor Descriptions

(End of Clause)

STATEMENT OF WORK

FOR

LANGLEY RESEARCH CENTER (LaRC) INFORMATION TECHNOLOGY ENHANCED SERVICES (LITES)

Exhibit A

1. INTRODUCTION

The NASA Langley Research Center (LaRC) in Hampton, VA, has been instrumental in contributing to aerospace technology for more than eight decades. Established in 1917 as the first national civil aeronautics laboratory, LaRC has become a comprehensive, world-class center for aeronautics, earth science, space technology, and structures and materials research. Further information on the LaRC mission and its contribution to the NASA vision can be obtained from the web site http://www.larc.nasa.gov.

To accomplish its mission, the Center depends heavily on state-of- the-art information technology (IT), embracing computer systems ranging from laptop and desktop personal computers to mid-range computers; network systems ranging from building-dedicated through Center-wide; data storage facilities ranging from CD's to massive, centrally accessed tape storage systems; and all of the associated operating, input/output, data transfer, data management, and data analysis systems.

The Center relies heavily on contractors to provide IT services. Two contracts provide most of the IT services to the Center: The Outsourcing Desktop Initiative for NASA (ODIN) Contract (and its successor I^{3}P contracts, Agency Consolidated End User Services (ACES), NASA Integrated Communications Services (NICS), and NASA Enterprise Data Center (NEDC) for the provision of desktop computing, networking, and telecommunications capability at the Center, and the Langley Information Technology Enhanced Services (LITES) contract to provide services that are not covered by ODIN or the I^{3}P contract. The Research Operations, Maintenance & Engineering (ROME) Contract provides IT services to most of the Center wind tunnels.

In general, the ODIN contract provides a broad range of general-purpose desktop computing support services including system administration, hardware and software maintenance, and help desk assistance. The ODIN approach is designed to offer a comprehensive, end-to-end desktop service for those systems that are considered to be fully functional and mature and provides an operational system that is stable. ODIN will be the default provider of desktop IT services for the majority of LaRC IT systems. The LITES contract, on the other hand, provides computing support services (including system administration and hardware and software maintenance and development of new software applications or modification of existing software to change or add to its functionality) for systems that are either uniquely configured or highly specialized in function and that are not providing office automation services for end users. The LITES services typically involve a wide range of support functions including those for non-standard operating systems, system interfaces, or for use within a dynamic environment such as a research laboratory or test facility. The LITES contract provides system administration as a component of integrated support. Integrated support encompasses all activities necessary to develop, deploy, upgrade, operate, and maintain an IT system which delivers an IT capability.

NASA intends to procure services to provide agency-wide management, integration, and delivery of IT infrastructure services under the Information Technology (IT) Infrastructure Integration Program (I^{3}P) Acquisitions. In line with this strategy, task orders under LITES for the following services will be reevaluated after the I^{3}P contracts are in place:

- Data Center Services (Application/Data Hosting and Housing IT Infrastructure; includes the services and hardware for End-User Devices, Communications, and Data Centers)
- IT Infrastructure Applications (includes those common applications used on a day-to-day basis, primarily for office automation; public website hosting; and web content management and integration)

The I^3P contract for Communications Services (LAN, WAN) will not impact LITES since these services are not in the scope of this contract.

2. SCOPE

LITES will include a broad scope of IT services, including new and emerging technologies, that will evolve over the life of the contract. The scope of support to be provided under this contract is intended to cover IT requirements in support of computers, ancillary equipment, software, firmware, services, and related resources.

LITES services fall into the following categories:

- IT Support Services

- Systems and Applications Development Services

- Work Area Specific Services

IT Support Services include, but are not limited to, systems administration, systems maintenance, database administration, and customer support. Section 4 more fully describes the requirements of this category of work.

Systems and Application Development Services embrace new software and modifications to existing software (other than those required for maintenance). Section 5 more fully describes the requirements for this category of work.

Work-Area Specific Services may include some or all of the elements of the scope described in sections 4 and 5, but are specific to particular LaRC work areas that are included in the LITES effort. Section 6 more fully describes the requirements of this category of work.

Work requirements for LITES will be furnished by the Government through the issuance of task orders (TO's). Technical performance standards and metrics will be provided in the TO's and the incentive fee plan.

Software development, operations, and maintenance under LITES apply to software at several levels of risk and control from minimal to critical (as it relates to impact to the Government) that will be specified by the Government in TO's.

The Contractor shall furnish all personnel, training, facilities, specialized equipment not provided by the Government as part of a TO, materials, and transportation necessary to perform these services. For on-site Contractor staff, the Government shall establish an arrangement with the LaRC ODIN contractor and provide all on-site Contractor desktop computers and services for equipment requiring access to the NASA internet protocol (IP) space. Any on-site Contractor-provided equipment connected to the NASA IP space shall require an approved waiver and shall comply with NASA Information Technology Requirement NITR-2830-1, Networks in NASA IP Space or NASA Physical Space.

While the majority of work is directly in support of LaRC at the Center, other Centers within the Agency, other industry and Government partners of LaRC are at times supported. This support may be provided at remote sites.

In the performance of this SOW the Contractor may be required to support IT projects that are subject to the scope of NPR 7120.7, NASA Information Technology and Institutional Infrastructure Program and Project Management Requirements. When such requirements are specified as part of a TO, the Contractor shall comply with NPR 7120.7 as applicable.

The Contractor shall determine, subject to Government approval, the most appropriate method to connect devices from offsite and near-site facilities that require connectivity to resources on LaRCNet (NASA IP Address space). Options are as follows:

1. Extend the LaRCNet perimeter to include the offsite facility. This option requires that IT resources on the GFE network, including but not limited to all desktops, laptops, and workstations, all cabling, all routers and switches, and other IT resources be managed and operated by the Government (or the Agency's service provider). No Contractor IT resources will be allowed to connect to the GFE network if this option is chosen.

2. Utilize the NASA Langley client-to-network virtual private network (VPN) system.

3. Electronic Task Order System (ETOS)

The Langley Research Center has the following requirements for an electronic task order system (ETOS) to support the effective management of the LITES contract.

The Contractor shall address all elements defined in Section H.3(c), Task Ordering Procedure, and those listed below. The system must meet interoperability standards of NASA-STD-2804, Minimum Interoperability Software Suite, and NASA-STD-2805, Minimum Hardware Configurations. The ETOS shall be compatible with NASA authentication standards and shall meet the requirements set forth in NASA EA-STD-0001, Standard for Integrating Applications into the NASA Access Management, Authentication, and Authorization Infrastructure. The Contractor shall provide all training necessary for users, and shall provide user support throughout the contract. The training materials shall be available electronically.

The ETOS shall provide **process flow control** (see table below) and **document management** with the ability to define specific roles within the process flow and assign them to specific personnel.

The roles will include, but are not limited to:

Government:
       CO – Contracting Officer
       COTR – Contracting Officer's Technical Representative

      Alternate COTR(s) – Alternate Contracting Officer's Technical Representative(s)
      RA – Resource Analysts within Office of the Chief Financial Officer
      TM – Technical Monitors (and Alternate TM's)
      Field Analysts – Budget Managers in the TM's organization
Contractor:
      Contractor Management and employees requiring access to the system

The ETOS shall support the ability to assign role-based access to documents. The ETOS system shall act as a document repository and shall house, at a minimum, the following information for the life of the contract:

- Task Statement of Work (SOW)
- Previous versions of Task SOW (e.g., Rev 1, Rev 2, Rev 3)
- Task Plan
- Task Estimate
- Monthly TO status reports:
    - Technical Status Report
    - Financial Management Report
    - Performance data related to the performance incentives (customer satisfaction, IT security incident responses, and validation of back-up and restoration of applications and data sets as defined in Section B.4, Performance Incentive)
- Monthly NASA Form 533 (for contract and for each task)
- Estimate of when current task funding will be depleted
- Task Deliverables or references to them if not in the ETOS

In the process flow, the ETOS shall have the ability to route documents or other items for review and approval across the various roles. It shall enable collection of performance evaluations and other performance incentive information. The ETOS shall also have a status indicator (or dashboard) to show current process status (contract-wide and on a task-by-task basis) e.g., "Awaiting COTR approval", or "Awaiting PM acceptance". The ETOS shall contain task funding history, funding collection capabilities (to support WBS collection to enable funding at the contract level by the COTR/CO), and task-by-task funding priorities to support appropriate costing against multiple WBSs by the Office of Chief Financial Officer (OCFO).

The ETOS shall support the four major phases of a task or work effort: task order definition, task order initiation, task order execution/administration, and task order closeout.

During task order definition and initiation, the ETOS shall support the development, communication, and review of draft requirements from the TM through the COTR and CO to the PM. It shall also be used to track and document the resulting draft task plan and iterations back and forth of the requirements and task plan through the approval process. It shall then be used to track and document the collection of funding information (amount, WBS/Cost Center/Fund), and costing information and priorities and the implementation of the tasks.

In the task performance phase, the ETOS shall facilitate communication between the Government and the contractor including performance status and deliverables, collection of funding information and costing information and costing priorities, and performance evaluations and other performance incentive information. ETOS shall contain funding reports that include at a minimum Purchase Request numbers, WBS, estimate to complete, and estimate at completion, and NASA Form 533s on a task-by-task basis (and at the subtask level if applicable), and shall allow for export of the data into MS Office Suite applications for Government users.

In the closeout phase, the ETOS shall track the deliverables and the funding and costing status.

ETOS shall support, at a minimum, the following process flow:

Task Order Definition
TM document/revise the Task technical requirements and schedule
TM approve technical requirements and submit to COTR
COTR review the requirements for scope and approve and submit to the contractor
Contractor review the requirements with the TM/COTR
Contractor prepare/revise a task plan and cost estimate and submit to TM/COTR
TM review and approve the task plan and provide any additional funding
Task Order Initiation

COTR accept the TO Request. The final approval and any updates to the ETOS file represent the official record. The official TO record includes:
    -the TO document which includes the Requirement Definition
    -specific metric(s) associated with this TO
    -the Contractor's Task Plan
    -the Contractor's Cost Estimate

TM provides funding (amount, WBS/Cost Center/Fund, costing prioritization). Funding may be provided as a single action to cover the entire estimated work or can be funded incrementally
Task Order Execution/Administration
TM/COTR monitor the contractor's performance on an ongoing basis
TM review technical and financial reports. Both financial and technical reports are posted monthly on ETOS.
The TM will monitor cost performance of the TO by reviewing the full cost financial reports posted on ETOS.
TM complete semiannual and/or annual TO evaluation (customer satisfaction)
Task Order Closeout
TM determines if work requirements have been completed; can occur from completion of all requirements, lack of funding, or unsatisfactory performance
COTR/CO notify the contractor to terminate work; when all of the TO requirements have been completed, the contractor will initiate the TO completion documentation after receiving notification from the COTR/CO.
COTR/TM reviews TO completion document and final cost upon receipt from the contractor
COTR/TM approves the TO completion document and forwards to contractor

The Contractor shall provide to the Government a data schema and data definition table for the application. Any changes throughout the contract performance period to the application will require a new data schema and data definition table. Also, at contract end, or by Government request at any point during the contract performance, the Contractor shall provide to the Government a complete data file containing all task data for the period of performance in a file format compatible with either an Oracle database or standard relational database format. Any portions of ETOS developed at Government expense shall be delivered with unlimited rights under FAR 52.227-14 as modified by NFS 1852.227-14. The ETOS shall be fully operational by contract start date.

4. IT SUPPORT SERVICES

Information technology support services are defined at a basic level as applicable to many TO's. The Contractor shall perform any or all of the functions stated in this section for systems that will be specified in TO's. A cross-reference will be provided in the TO indicating what functions of Section 4 will be required for each system in the inventory of equipment and software.

Changes to Agency or Center IT policy will occur throughout the contract period. In all cases, implementation of these policy changes by the contractor shall be mandatory. The Langley OCIO shall be the sole arbiter in any instance where a TM requests a waiver from policy implementation.

Services will be provided for a prime shift of 8 hours per day beginning no earlier than 7:00 a.m., Monday through Friday, except for Federal holidays and other days when the Center is closed. Flexible shifts are permitted when the TM concurs that the requirements of the task can still be met. Where more rigorous requirements exist, they will be defined in TO's.

The contractor shall monitor the currency of maintenance contracts and software licenses and notify the TM at least 6 months prior to the expiration of the maintenance contract or license. In some cases, the contractor will be responsible for acquiring the licenses. All supported software will be licensed to the Government.

4.1. System Management/Administration

System management and system administration are interrelated and yet distinct activities. System management pertains to policy and procedures and applies to all TO's. System administration is more the hands-on operation, support, and maintenance of system hardware, software, and peripherals. The contractor shall perform any or all of the following requirements as directed in TOs:

4.1.1.   Configuration Management

Maintain a configuration management process that will meet the systems' security plan and NIST guidelines. Document and keep current standard configurations and processes, as well as any deviations to those standards, for all systems related to the TO.

4.1.2.   System Software and Hardware Upgrades/Enhancements

a) Monitor user requirements and system performance. Monitor the availability of updates and upgrades to installed equipment and system software and the availability of new equipment and system software that would apply to the supported system. Participate in system reviews and recommend the installation of updates, upgrades,

and new equipment and system software as appropriate. All systems shall be up-graded as new versions or updates are made available such that they are compliant with NASA-STD-2804.

b) Plan for the installation of new or upgraded equipment and system software. This includes the consideration of cost, schedule, performance, power, environmental util-ities, space limitations, networking, workflow, and the impact on other elements and users of the system. The Contractor shall include a set of reviews and written test procedures in accordance with industry best practices and Agency and Center IT policy.

c) Following Government approval and successful completion of all testing and reviews, install and verify the operability of new or upgraded equipment and system software. Minimize unavailability of system services.

d) Recommend specific solutions and obtain quotes from appropriate suppliers.

e) Maintain a realtime list of system users, including business and scientific application points of contact. Inform all users of impacts from system upgrades and improve-ments a minimum of 2 weeks prior to any upgrades or system outages.

4.1.3. Operations

a) Perform routine operations such as power up and shut down.

b) Interface with equipment vendors or service providers for the maintenance of equipment and software.

c) Interface with network service providers for access to networks and to resolve problems associated with network access. All network connections shall follow Agency and local policy and guidance.

d) Diagnose anomalies in the operation of equipment or system software. Provide timely fixes or work-arounds where possible. Report and document problems re-quiring correction. When necessary, interface with other IT service providers to re-solve problems. Initiate corrective action. Follow up to ensure problem resolution. Response to problems during prime shift will be within 2 hours of notification or as specified in TO's. Ensure all changes and resolutions are documented.

e) Backup and restore files to ensure reliability of files. Create a backup plan, contin-gency plan and test procedures to be tested annually. Monitor the operation of the system and adjust the configuration and system parameters as necessary to maximize operational efficiency.

f) Create and modify scripts that increase functionality or enhance system operation or performance and document.

g) Recommend operational improvements and implement them upon Government approval.

4.1.4. Documentation

Develop, deliver, and maintain the following documentation:

- Baseline hardware and/or software configuration.

- Backup/Recovery procedures and test procedures.

- Access control procedures and authorization records.

Additional documentation may be defined in TO's.

4.2. Hardware Maintenance

Hardware maintenance as defined in this section includes the repair and replacement of hardware components necessary to ensure operability of the covered equipment or to return the covered equipment to a fully operational status. The covered equipment includes those items that are specifically identified in a TO. Services that shall be provided in satisfying the hardware maintenance requirements include:

a) Diagnose problem or failure.

b) Repair or replace failing components. Replacement parts shall meet or exceed Original Equipment Manufacturer's standards.

c) Verify and document that repair or replacement performs to manufacturer's standards.

d) Verify and document that the performance of the system following the repair or replacement of failing components, meets or exceeds the performance of the system prior to system failure.

e) Reload any files and/or data (if accessible) that are contained on a replaced or failing component before returning the system to operational status.

f) Return any replaced components that contain classified data to the user.

g) Based on current Agency guidelines and IT Security policy, cleanse (to ensure that data is fully erased and not retrievable or accessible by any means) any replaced data storage equipment that contains unclassified data prior to disposal or returning to the supplier, and maintain a documented log to indicate that this action was completed.

4.3. System Software Maintenance

System software maintenance as defined in this section includes the services required to ensure continuing operation of system software. All supported systems software will be licensed to the Government and will be specifically identified in a TO. The contractor shall perform any or all of the following requirements as directed in TO's.

a) Analyze software failure or performance degradation.

b) Obtain software updates and upgrades from the vendor or public domain sources (if required in individual TO's).

c) Install software updates to ensure that system is operating at the current IT Security posture.

d) Verify system operation following software upgrades.

e) Perform full system, file, and data backup prior to software upgrades.

f) Preserve and/or restore all files and data during software upgrades.

g) Ensure that any and all Agency required software is loaded and maintained, (i.e., Patch Management client software, etc.) if applicable to meet Agency guidance and policy.

4.4. Application Management

Application management is highly integrated with the management of system software, servers, associated system hardware, and overall system administration operations. Consistent proactive monitoring, system design, and tuning assure optimal resource utilization and performance.

The application software used in support of NASA LaRC missions, business processes, and specific IT functions range from high end commercial suites to open source packages to locally developed applications and specialized NASA applications, processes and tools which are integrated across commercial and open source architectures into cohesive computing environments.

These applications (with representative examples) can be categorized as follows:

1) Agency Systems, e.g.:

   a. Integrated Enterprise Management (IEM) software for core business management and administrative functions such as

      - SAP, Business Warehouse (BW) Reporting Tool, WebTADS, Agency Labor Distribution System (ALDS), Federal Personnel Payroll System (FPPS), Contract Management Module (CMM), and P-Card

   b. E-gov initiatives; FedTraveler; Workforce Integrated Management System (WIMS)

2) COTS software, including for example—

   a. Pro/Engineer Computer Aided Design package.

   b. NASTRAN, PATRAN, Matlab, or similar engineering analysis software.

3) Non-COTS (non-Agency) software not developed locally, including for example—

   a. Funds Control System (FCS)

4) Software developed by or for LaRC and used in production mode, including for example—

   a. Airspace and Traffic Operations Simulation (ATOS)

   b. AeroCompass data reduction software for processing wind tunnel test data and flight data.

   c. FAB Work Order Control System (FWOCS)

   d. Programmatic Budget Development (PT)/Planning, Programming, Budgeting and Execution (PPBE) Tools, e.g., Center Management & Operations Budget Tool (CMOBFT) automates the gathering of the CMO budget details, shortfall requirements, and reduction scenarios by Project/organization; Langley Integrated Financial Environment (LIFE); Cost Analysis and Reporting Tool (CART); LaRC Financial Dashboards.

e. User Profile / Training Request System

Application services may be required as part of integrated support as described in Section 1, Introduction, or it can be an independent requirement. In the case of an independent requirement, the Contractor shall interface with other cognizant IT personnel to plan upgrades and resolve problems. Application management requirements include:

4.4.1. Application Maintenance, Upgrade, and Improvement

a) Develop and maintain a configuration management process (consistent with section 4.1.1) to include the following:

- Current software versions

- Status of planned upgrades

- License information

- Software maintenance status

- Locations of source code and documentation

- Issue/bug tracking

b) Optimize the execution of the application. Monitor the application for anomalies and respond to customer trouble reports. Analyze problems, interface with cognizant IT personnel if necessary to resolve problems. Implement and record corrective action.

c) Plan for and recommend evolution of the application. For example, advise the Government on applicability of upgrades and recommend possible software solutions to identified user requirements.

d) For COTS and non-locally developed applications, actively monitor availability of patches and upgrades. Evaluate upgrades, recommend schedule for upgrade, and inform customers of impact of upgrade.

e) Interface with software vendors to obtain patches and upgrades. Procure software updates and upgrades from the vendor (if required in individual TO's). Install patches as required to ensure that application remains current, secure, and reliable. Install upgrades according to schedule approved by the Government. Interface with cognizant IT personnel as necessary to ensure smooth upgrade. Perform upgrades with minimal impact to users and notify users of interruptions in application availability.

f) Maintain software developed by or for LaRC. The Contractor shall document and execute a maintenance plan that complies with the requirements of NPR 7150.2, NASA Software Engineering Requirements. The process shall be tailored to the particular software package and applied with a rigor consistent with the software class. Maintenance process requirements by software class will be further defined in a TO to be issued at contract start.

g) Advise customers on effective use of the software.

h) Analyze the agency IT security policies in order to implement these security measures for unique hardware and software needed to accomplish mission requirements and be in compliance with Agency and Government policies and mandates.

i) Ensure all applications are tested using a commercial testing tool for IT Security re-lated security vulnerabilities prior to going into production as well as regularly throughout the application life cycle.

j) Work with local IT Security team and system owners to ensure that all proper safe-guards have been implemented and documented in the IT Security plan for the sys-tem housing the application.

4.4.2. Documentation

a) For COTS and non-locally developed software, maintain and make available a library of application documentation via a web-based library.

b) For software developed by or for LaRC as identified under Subsection 4.4.1 (f), de-liver a Configuration Management Plan within two weeks of receiving the TO. The Configuration Management Plan shall document the level of maintenance to be per-formed; how problems and/or modifications are identified, classified, prioritized, tracked, and analyzed; and the approval, implementation, and test process to be used.

4.5. Database Administration

Database administration (DBA) shall be provided for those TO's identifying a database management system (DBMS) environment, including DBMS software and associated database tools. The contractor shall perform any or all of the following requirements as directed in TO's:

4.5.1. Installation of Database Software and Tools

a) Utilize the Center's Central Web and Database Servers as the default condition. Provide written justification when the requirements prohibit the use of the central ser-vices.

b) Install and maintain new and upgraded DBMS software and associated tools on both production and development systems. Identify impacts of new and upgraded soft-ware by testing, documenting, and communicating impacts to customers, IT Security, network services, and the Center IT Operations Board before implementation.

c) Install and maintain new and upgraded databases on both production and develop-ment environments.

d) Ensure operability of the DBMS environment. Achieve and document a common or standard configuration for the DBMS environment to enable application developers to efficiently produce predictable results.

e) Ensure compatibility between the DBMS and the operating system and interact with cognizant IT personnel to ensure that the system adequately supports database ap-plications.

4.5.2. Monitoring and Configuring Database Engine and Tools

a) Monitor activity of the database engine to determine efficiency of the database en-gine and applications. Manage disk space allocations, perform consistency checking, and monitor logical/recovery logs as well as notify the Government and/or network services provider of any impact to the network or related services.

b) Based on the configuration of the file server and the existing and projected database workload, configure the database engine to optimize performance of database applications while minimizing effects on the rest of the file-server workload.

c) Analyze the database workload and storage needs and plan for growth for databases and applications. Make determinations of DBMS software to support these needs, and communicate hardware/system software requirements to system administrator. Implement recommendations upon Government approval.

d) Monitor use of the licenses for the database engines and related tools and provide report to Government. Communicate with vendors and the Government to develop software maintenance strategies and maintain current licenses. If the database is an Oracle database, all licenses must be coordinated with the OCIO through the Agency License Management representative.

e) Provide solutions for allowing connections to the database engines from other platforms while following appropriate IT Security concerns. These solutions will include the use of ODBC (open database connectivity) and database client tools. Provide user training in the installation and configuration of these connections as needed.

f) Ensure that all updates and patches are current in accordance with the Agency guidance and IT Security

4.5.3. Archiving and Restoring

a) Archive and restore the database instance and logical logs, and provide input into system disaster/recovery plan to ensure restoration of database. Restore data as required.

b) Create a test plan and perform periodic tests (at least every 6 months) to ensure that hardware, software, and processes will function as required to support archiving and restoring of data and to verify the disaster/recovery plan. Document all results appropriately.

4.5.4. Security of databases and instances

a) Maintain security of databases by managing access and passwords in compliance with NPR 2810.1A and DBMS application-specific requirements.

b) Assist developers with managing access privileges to tables, stored procedures and other areas of the database.

c) Periodically (at least weekly) audit logs to identify potential security breaches. Notify IT Security of any and all suspected inappropriate activity.

4.5.5. Documentation

Fully document, deliver, and maintain documentation for the following:

- Current configuration of the database environment including site specific parameters and tools installed and their availability.

- Historical tracking of changes made to the DBMS environment over time.

- Operational procedures in the administration of the database environment

- Procedures to be used by end users using the database environment

- Database archive/restore strategy to be included in system disaster recovery plan

4.5.6. Resolution of Problems/Issues

a) Provide troubleshooting to identify and solve problems/issues related to the database instance or related tools. Document these problems/issues and lessons.

b) Interface with system administrator and application developers to develop solutions to problems and implement corrective action. Maintain trouble report tracking system to give status of problems and their resolution.

4.6. Customer Support

I^{3}P will provide Tier 1 help desk support for the Center. The LITES contractor shall establish a signed formal agreement with the I^{3}P contractor to coordinate assignment, tracking, and resolution of I^{3}P help desk calls pertaining to systems and applications supported by LITES.

A basic level of customer support is required for all IT Support Services to include:

a) Consultation and assistance on basic use of equipment and applications.

b) Efficient mechanism for communication between customer and IT support staff.

c) Prompt response (within 2 hours) to user problems. Two hours commences when the call is received by the LITES contractor.

d) Provide and use an electronic customer request tracking system to give the current status of requests or problems and their resolution.

e) Interface with system administrators, system security administrators, database administrators, and other application administrators as necessary to resolve the problem for the customer.

Other customer support activities such as help desk, training, and end-user documentation will be specified in TO's.

4.7. Consultation and Training

The Contractor shall provide technical support, consulting, and coordination to ensure orderly system implementation, integration, and operation of all systems, systems software, and application software identified in TO's. The contractor shall perform any or all of the following requirements as directed in TO's:

a) Assist the Government in defining data and information requirements, data sources, and intended end-user applications, and recommend appropriate information technology, products, and capabilities for satisfying information requirements.

b) Design, develop, and revise training materials for systems and applications relevant to LITES Contract. Schedule classes, arrange logistics for classes, conduct training, validate training effectiveness, and provide information for input to student records.

c) Perform studies analyzing new technologies, analyzing feasibility of technical approaches, defining user requirements, analyzing existing environments, identifying constraints, deriving and analyzing alternative solutions, recommending approaches and solutions, and estimating costs and benefits.

d) Advise on internal programs/projects which require financial information access and delivery solutions.

e) Partner with LaRC to deliver new solutions and capabilities.

f) Participate in cross-business initiatives that deliver analytical solutions and define the next generation of financial analytics.

g) Perform ad-hoc system/user issue resolution.

5. SYSTEM AND APPLICATION DEVELOPMENT SERVICES

Services in this category involve the development of new software or the modification of existing software to change or add to its functionality. Modifications to correct faults, improve performance or other attributes, or to adapt to a changed environment, are considered maintenance and are covered in Section 4 of this SOW. The contractor shall perform any or all of the following requirements as directed in TO's:

a) Design and development of new software packages to meet specified requirements.

b) Design, development, and/or integration of new systems integrated from hardware, commercial software, and newly developed applications.

c) Development and integration of software applications within existing system environments; for example, a database application developed on central database servers.

d) Modifications to existing software to change or add to its functionality.

e) Software support to research and/or development projects that involve the continuing evolution of specialized algorithms and techniques.

5.1. Work Requirements

In the planning and execution of the work as specified in the TO, the Contractor shall undertake any or all of the following activities:

a) Analyze requirements to determine the feasibility of providing the desired software, target computer system, computer programs, results, documentation or other deliverables.

b) Document the conditions and capabilities that must be met or possessed by the product (the design to requirements).

c) Integrate equipment, software, communications, and processes to develop and deploy a new system or IT capability, including procurement of hardware and software if required.

d) Design, develop, and test software to meet specified technical and quality requirements.

e) Modify existing software in order to change or add to its functionality.

f) Perform authentication of application configuration against documented user requirements. Provide systematic control of application software change requests.

g) Perform software quality assurance, prepare test plans, perform software acceptance testing, and document test results.

h) Prepare installation and operations plans/procedures to support systems or applications delivery.

i) Develop or update documentation such as user manuals, reference manuals, requirements documents, design documents, and test plans using either online or hard copy format. Maintain configuration of the documents within the LaRC Document Management System.

j) Perform independent analysis of mathematical, logical, system approaches and perform comparison studies of competing techniques to solve problems.

k) Collect and analyze process and product metrics. Identify, evaluate, and implement promising new processes, procedures, and technologies to improve software engineering capability, productivity, and quality.

l) Comply with the requirements of NPR 7150.2, NASA Software Engineering Requirements, augmented by software-related Langley Management System Center Procedures; NASA-STD-8739.8: Software Assurance Standard; and NASA-STD-8719.13B: Software Safety Standard. Processes shall be tailored to the specific project and applied with a rigor consistent with the software class and safety criticality. Life-cycle process requirements by software class will be further defined in a TO to be issued at contract start.

m) Certain TO's may involve software development for human-rated software systems, non-human space rated software systems, or mission support software that would require the Contractor to be rated at Capability Maturity Model – Integration (CMMI®) for Development Capability Level 2 or higher.

5.2. Software Engineering Process Support Requirements

The Contractor shall provide software engineering support, including the definition, implementation, and continuous improvement of complete software development lifecycle processes and procedures for LaRC as a whole, individual LaRC organizations, and projects. The primary focus of this area is to support LaRC organizations with implementing LaRC's Software Process Improvement Initiative, the software-related Langley Management System Center Procedures, NASA software related NPRs and standards, and the process areas of the Software Engineering Institute's Capability Maturity Model–Integration (CMMI®).

5.3. Information Systems Development

The Center is continuing to develop the LaRC Business Application Information Architecture, that is, a framework within which business information management systems shall be designed. No database development shall be performed in legacy database application environments, and any modifications to legacy databases shall include conversion to the LaRC business application information architecture. The architecture relies on standards and configuration control to provide interoperability between databases, reduce the development of unique or duplicative systems, permit focus and skill-building among the technical and consumer work force, and reduce application specific training required by end users.

The Business Application Information Architecture technical environment consists of a suite of tools and database management systems which support the standards selected for use. Current tools include:

- Operating Systems
  - Solaris
  - Linux
  - Windows
- Web Server
  - Apache
  - I-Planet
- Database Management
  - Oracle
  - MySQL
- Reporting Tools
  - Hyperion tools
  - Business Objects Crystal Xcelsious
- Open Source Scripting Code
  - Perl
  - PHP
  - .NET

Research oriented tasks may not use the standard architecture as described. Exceptions to the standard architecture will be specified in the TO and will have requirements that would not allow it to be housed in the Center's Central Web and Database environment.

5.4. Data Reduction Programming and Analysis

The Contractor shall provide data reduction programming and analysis support to a wide variety of research facilities with research disciplines ranging from rotorcraft, low-speed aircraft to hypersonic spacecraft, dynamic flight testing, and structural analysis and materials research in static laboratory testing. A significant portion of this support includes the development of utility and application interfaces such as Graphical User Interfaces (GUI) code or control software, using COTS packages. The development may also include data acquisition software and translators for information exchange between heterogeneous platforms and other IT intensive applications. The extent of the application management support for the existing and newly developed applications may range from installation only to full support involving additional software or script development, code enhancements, execution of the application, generation of required products, and consultation.

6.   WORK-AREA SPECIFIC SERVICES

The work areas of the LaRC IT environment described in this section represent some, but not all, of the support required throughout the life of the contract.

As stated in Section 3, TO's will be issued to specify required services. These services may include any or all of the general support requirements given in Section 4 and soft-

ware development requirements given in Section 5, but also may include requirements that are specific to a work area. In addition to a brief description of each work area, specific requirements are listed that are representative but not all-inclusive of that work area.

Reference to "integrated support" of a system or systems encompasses all activities necessary to develop, deploy, upgrade, operate, and maintain a production IT capability.

Many of these work areas require services involving the operation of hardware and software systems to produce data; reports; or business, scientific, or engineering solutions. If this is the case a TO will require that the Contractor develop an "Operations Plan," defining the procedures for receiving requests; prioritizing, approving, scheduling, and executing work, and delivering products; resolving operational problems; providing user assistance and training.

6.1. Centralized Web and Database Servers

The Central Web and Database Servers are designed to meet the general server computing needs of the Center. The servers are provided by the OCIO as a way to more efficiently, effectively, and securely meet the needs of the Center. The OCIO provides these services to the NASA Langley Research Center users and other NASA center users. The environment used to support these services consists of a heterogeneous network of Unix, Linux, and Windows. Onsite system administration is required to maintain resource availability and IT security within and outside the LaRC domain. Central web servers and products on those servers are available for web site hosting and web development activities that promote and support LaRC teams, organizations, and programs. Several web technology products are available on the centralized web servers including web server software, web application development software, a search engine, site usage analysis tools, and Secure Socket Layer (SSL) capability. Requirements specific to this work area include:

- Provide integrated support for central web servers including system administration, performance and security monitoring, daily backup, log monitoring and archival, and monthly access reports.

- Provide for all hosted web sites a unique virtual server name, a dedicated IP address, disk space for site development, and monthly report of site activity.

- Respond to problems and questions directly related to web software residing on the central servers and monitor sites and servers for any problems that interrupt services or compromise security. Collaborate with the network services team as well as the IT Security team to ensure all requirements are met and that no adverse impact to the network is experienced.

The environment generally consists of the following:

Operating Systems:

- Windows

- Linux

- Solaris

Web Servers:

- Apache

- I-Planet

Databases:

- Oracle
- MySQL

Scripting Language Support:

- PHP
- Perl
- .NET

Search Capabilities:

- Google Search Appliance

Web Usage Statistics:

- WebTrends

Other applications and user tools that assist in the operation and maintenance of the environment are also used. The contractor (in collaboration with the government) shall introduce new tools into the environment as technology evolves.

6.2. LaRC Digital Library Systems

The OCIO provides desktop electronic information services to NASA Langley Research Center users and other NASA center users. The OCIO operates a number of integrated hardware-software systems consisting of commercial-off-the-shelf (COTS) applications, LaRC developed applications and commercial information products. These products and applications are used to provide Center-wide information systems and services to the LaRC and NASA technical community in accessing information related to engineering and research and to address overall information management needs. These systems include: (1) Langley Digital Repository using DSpace that has more than 70,000 unique aerospace digital documents with navigation and search capability; (2) Technical publications approval and management system (TPSAS) that is required to be used by all Langley authors and publications; (3) Google search system that integrates internal and external databases, subscriptions, and web sites providing easy access to technical information; (4) electronic materials request system such as ILLIAD; (5) NASA GALAXIE, a NASA-wide on-line library management system providing modules for managing circulation, acquisitions, cataloging, and serials; (6) Federated search tools such as Metalib and SFX; and (7) Bibliographic information management tools such as Refworks. New digital and electronic information products are emerging rapidly, and the OCIO is continuously evaluating and planning to incorporate these new products to maximize the use of content, address information overload and to enhance the services.

Services shall include application configuration, application management, database administration, customer support, and IT consultation and training to the OCIO staff in order to support the users. Requirements specific to this work area include:

- Provide application configuration, application management, application development and customer support for the Langley Digital Repository system that uses DSpace software.

- Provide application management, and customer support for Langley Google system that uses Google Search Appliance and Google Custom Business Edition software.

- Provide integrated support for NASA GALAXIE system and provide customer support to staff in all NASA libraries in the form of telephone support, staff training, and documentation.

- Provide integrated support for all other systems: TPSAS; RefWorks; SFX; Meta-Lib. Install, update, configure, maintain, and provide customer support.

- Operate, maintain, and enhance digital library applications; Perform database administration and maintain and enhance database applications.

- Provide usage statistics and trends and inputs as to maintenance needs of the various systems, needed system upgrades, changes in system technology, and new digital information products and services that can help the user community.

6.3. Database Administration and Management

A central database architecture is part of the Central Web and Database Servers available for the development of applications by LaRC teams, organizations, and programs. The central environment can be used to develop applications to be hosted on central database servers or on customers' own systems. The Contractor is responsible for providing and managing software, tools and administration of database systems and for supporting NASA and the NASA Langley Research Center (LaRC) community requirements and initiatives. The contractor shall provide support in the following areas:

- Provide integrated support for central database servers including database administration of Oracle and MySQL.

- Administer Oracle and MySQL licenses and licenses for associated database development tools. License management is provided by the Government.

6.4. Large Scale Data Storage and Retrieval System

The Contractor shall support the Central Storage System (CSS). The CSS provides large scale, network-accessible storage for LaRC, other NASA Centers, and their approved contractors. CSS uses a Hierarchical Storage Management (HSM) approach with three levels in its storage hierarchies:

- Disk

- Primary copy tape

- Secondary tape

The current configuration consists of IBM AIX servers, Fibre-Channel disk array systems, and a Sun/StorageTek Automated Cartridge System with T10000A and T10000B tape technologies. The HSM software used is IBM's High Performance Storage System (HPSS). The CSS is used by users at LaRC and other NASA centers to store:

- Archive data (for both active and non-active projects)

- Working File Sets (Temporary storage of large data files for near-term computational needs)

- LaRC Distributed System Backup Data

Requirements specific to this work area include providing quality round-the-clock data storage and retrieval services to individual users and IT services. The Contractor shall ensure the security of the stored data by maintaining highly disciplined control and monitoring of the physical and software accesses of data as well as the environmental factors required of the tape technologies for data integrity. The Contractor shall ensure user-transparent migration of data prompted by hardware and software technology upgrades. Additionally, the Contractor shall address new user or project data requirements and Government's IT infrastructure requirements, and evaluate mass storage systems and technologies and the interface of mass storage systems to other IT technologies. The Contractor shall develop maintenance contracts for all CSS hardware and system software with the exception of HPSS support, which is provided by the Government. The Contractor shall provide the offsite storage services. The Contractor shall provide for disaster recovery of data for CSS by housing the Secondary Copy Tape offsite in a secure facility.

6.5. LaRC IT Security Manager Support

The Contractor shall support the LaRC Information Technology (IT) Security Manager (ITSM) or Designee to implement the IT Security (ITS) Program at LaRC in accordance with NIST guidelines and NPR 2810.1x, Security of Information Technology (see the following URL: http://nodis.hq.nasa.gov). The ITSM's role is to develop Center-wide IT security policies and guidance, to provide computer awareness and training, to maintain an incident response capability, and to document, review, and report the status of the Center IT Security Program. The Contractor shall provide NASA Langley Research Center with the following: incident response and computer forensics; intrusion detection and monitoring; remote access compliance; consultation for ITS planning; coordination of ITS activities with other Centers and the Agency Security Operations Center (SOC); perimeter protection, to include support and operation of a Virtual Private Network (VPN) and firewall; and outreach. They shall also provide system administration support for the systems that support the ITSM's role, including the Langley Registration Authority (RA) for the NASA LaRC Public Key Infrastructure (PKI) at NASA LaRC.

6.6. Geometry Modeling and Grid Generation

Geometry modeling and grid generation support includes the production of accurate geometry definitions and numerical grids for Computational Fluid Dynamics (CFD), Computational Structural Mechanics (CSM), and other engineering analyses. This work is centered in the Geometry Laboratory (GEOLAB). Requirements specific to this work area include:

- Provide integrated support for the GEOLAB systems.

- Create and modify numerical geometry models using computer aided design software systems to be compatible with software tools using multi-block structured or unstructured grid generation techniques.

- Generate numerical grids compatible with the physical conditions to be investigated and the software and geometry configurations used for analyses.

- Analyze grid quality and validate the integrity of geometry models and grids.

- Incorporate geometry model measurements acquired using digital scanners into geometry models.

- Develop software and interfaces to integrate use of geometry tools within analysis and visualization tools.

- Provide consultation services in structured and unstructured grid generation and geometry modeling techniques.

6.7. Data Visualization and Image Processing

Data visualization support involves the development and application of data analysis and visualization tools and techniques for a wide variety of disciplines including Computational Fluid Dynamics, Computational Structures, atmospheric modeling, remote sensing, and experimental fluid dynamics. This work includes support of the Data Visualization and Analysis Laboratory (DVAL). Requirements specific to this work area include:

- Generate static and dynamic visualizations from experimental and computational data sets.

- Process and analyze large sequences of video images.

- Apply collaborative virtual environments technology to specific research problems.

- Develop custom software applications with sophisticated graphical user interfaces.

- Apply feature extraction techniques to complex, multivariate data sets.

- Consult on methods for the comparative visualization of simulated and observed results.

6.8. World Wide Web Application Development and Support

WWW support is focused on application development activities at LaRC. The term "WWW application" refers to software products that include a World Wide Web browser as their user interface. Typical WWW applications are comprised of static or dynamically generated code in Hypertext Markup Language (HTML) or a scripting language, often include executable components and sometimes include connectivity to databases. Requirements specific to this work area include:

- Develop WWW applications including web page interface design.

- Develop code and data reuse repositories.

- Keep current with latest web technologies and architectures, and recommend ways to use these technologies at LaRC.

6.9. High Performance Computing and Distributed Systems

LaRC is currently involved in many high performance computing programs and projects. The systems that these activities require are current, state-of-the-art computing systems that utilize a variety of computer hardware, operating systems (e.g., Linux, MacOSX, and/or Windows), and applications codes. The major requirements for the support of high performance computing specific to this work area include:

- Provide expert consulting services on the application of high performance hardware and software solutions for Langley's programs and projects.

- Administer organizational level and center level computer systems used primarily for the production of engineering data where large numbers of processors, large memories, or extensive data management is required to meet LaRC engineering and scientific goals.

- Facilitate the development, debugging, performance analysis, and optimization of user and system wide applications.

- Develop performance metrics, benchmark, test, and evaluate new architectures and software to meet current and future needs.

- Administer LaRC parallel and clustered computational, visualization, or application servers including state-of-the-art architectures.

- Support specialized libraries for system or software development for high performance computing architecture.

- Support compilers, development tools, and specialized applications codes for use on high performance computing architecture.

- Develop unique solutions to isolate, eliminate or mitigate information technology centric problems in engineering and scientific applications.

- Provide expert consultation in the design of state-of-the-art computing systems including clusters, file servers, parallel and high performance file systems, visualization, and cluster interconnection and software for these systems.

In addition to the high performance computing requirements there are distributed systems consisting of clusters of networked computers and associated equipment, located at various sites throughout the Center, which are used in specific experimental or analytical environments. These clusters are generally used by small groups of researchers or engineers with particular specialties such as computational fluid dynamics, computational structures, engineering design and development, modeling and simulation, software development, and other IT intensive applications. Most work will be accomplished at LaRC; however, occasional travel will be required to support work in collaboration with other NASA centers, Government agencies, and industry.

The services required for distributed systems primarily consist of systems administration, database administration, hardware and software maintenance, and applications management as described in Section 4. Applications programs include "Commercial-off-the Shelf" (COTS) as well as custom software developed by civil service personnel or other contractors. Support for this application software may include only the distribution and installation of the applications package and upgrades (designated as software maintenance) or full technical support services including software development, enhancements, and consultation. Some examples of COTS applications support requirements include support for Pro Engineer, Windchill, Matlab, LabView, NASTRAN, and Mechanica as well as locally generated software for engineering analysis, database management and knowledge management.

6.10. Geographic Information Systems

Geographic Information System (GIS) is an intuitive spatial data management and decision support tool. Institutional managers are the current primary users of data and processes, but use of the technology by researchers is on the rise. The spatial information management system is built around a relational database consisting of data that includes or is derived from such records as: aerial photographs, topographic maps, descriptions and engineering drawings of buildings and facilities, utility plats, geological data, climatic records, financial data, and personnel locator records. The location of objects such as buildings - or even individual offices - is given with high accuracy in coordinates derived from the satellite-based Global Positioning System (GPS). GIS at LaRC strives to integrate functions such as Master Plan, Real Property, Space Utilization, Facility Maintenance and Operations to increase accuracy and sustainability of data. Support is often provided at remote sites.

The database can be interactively queried through web pages to extract up-to-date maps or plans restricted to selected features or to produce reports relating selected data. Examples are: maps depicting the effects of flooding correlated to tidal stages; maps and reports detailing utility systems; maps and reports in support of master planning (e.g. land use, security, emergency evacuation, traffic flow, parking, landscaping and environmental monitoring); and reports on space utilization (e.g., office occupancy densities for both contract and civil service personnel, and associated full cost accounting for facilities). Automated space allocation optimization is an area where spatial data technologies are being applied to increase overall efficiency and effectiveness. Other information can be extracted from the available data on a case-by-case basis.

Requirements specific to this work area include:

- Provide integrated support of the GIS systems

- Update and enhance GIS databases

- Provide field observation, network solution, equipment readiness, and report generation in support of GPS data gathering and use. Proficiency in use and application of high accuracy GPS equipment, and 3D laser scanning systems is required.

- Develop and enhance software products for the display, maintenance, and publication of building spatial data and Master Plan related data.

- Develop new software tools and maintain existing tools to support the activities of the GIS using .NET and ArcGIS Server technologies.

6.11. Computational Analysis and Programming Services for Research and Flight Projects

This activity includes the mathematical modeling of physical systems; development of real-time embedded systems; 3D graphical scene generation; the determination of computational techniques and algorithms for the solution of the resulting mathematical problems on appropriate computer systems; and the development or adaptation of computer codes to implement the solution process. Mission software may be required for LaRC programs and projects such as the Aviation System Capacity Program, the Clouds and the Earth's Radiant Energy System (CERES) Project, the Airspace Systems Program, and the Aviation Safety Program. Requirements specific to this work area include:

- Establish data management systems, graphical interfaces, and software for combining computer programs to provide for integrated analyses of multidisciplinary research projects.

- Develop embedded flight software systems to provide real-time instrument control and data acquisition.

- Develop ground computer software systems to support instrument development, test, calibration, commanding, and simulation.

- Develop, test, and maintain ground computer software systems that enable flight deck-based, airspace and Air Traffic Management (ATM) simulation systems and research.

- Develop software procedures for the integration and test of a flight experiment with its spacecraft or airframe platform. On-site diagnostic support for comprehensive performance tests that involve the operational behavior of the flight experiment and its attendant flight software and ground systems.

- Write and maintain project documentation for software systems. Programming languages required include, but are not limited, to FORTRAN, C, C++, Java, JavaScript, and Perl.

6.12. Central Computer Facility Environmental Monitoring

The 1268 building complex is comprised of numerous heating, ventilation, air conditioning, mechanical, and electrical systems that are essential to supporting a wide variety of research and Information Technology functions for LaRC. Due to the complexity and potential failure of these systems it is essential that continual monitoring and control of the facility be provided. Also, as result of additions, changes, or deletions to the facility systems and changes in office and equipment areas, there is a frequent need for maintaining current facility drawing and configuration files. Requirements specific to this area include:

- Provide system administration support for all systems required to monitor and control the 1268 building complex HVAC systems.

- Monitor and Maintain 1268 Facility and all LaRC communication closet UPS (Uninterruptible Power Supply) systems.

- Provide facility configuration and layout documentation and drawings

- Provide system administration support to ascertain that the 1268 building complex is in compliance with LaRC Center and Federal electronic and physical security plans.

- Coordinate electrical and mechanical work with respect to site preparation for new and reconfigured computer equipment/facilities.

- Review, monitor, and analyze problems associated with facility power distribution, control systems, HVAC, computer chilled-water systems, and initiate corrective action, including third party hardware and/or software maintenance contracts.

- Monitor and maintain emergency backup power systems (Uninterruptable Power Supplies and Generators) for readiness and maintain operational log book of the power distribution.

Aperture CAD software is used for facility drawings, Siemens Insight HVAC software is used for environmental control, and APC Infrastructure Management System and MGE Monitor Pack software is used for UPS monitoring. Both hardware and software elements are associated with these systems to insure proper and reliable operations.

6.13. Administrative Business Applications/Support

Provide support to the LaRC Office of the Chief Financial Officer (OCFO) in the following areas:

- Evaluate and provide support for management of financial management policies, processes, and controls at the Center, and provide recommendations.

- Provide business systems application development and operational support, including testing, training, and help-desk support.

- Support Center and Agency with system architecture design, development, implementation, and management. This includes compliance with Agency standards and guidance and supporting system architecture relative to documentation, governance, and technical (e.g., database design and user access) components.

- Provide project management and implementation support for business computing projects (Agency or Center). Develop and provide a project scope, work breakdown structure, requirements collection and management, stakeholder identification and analysis, project task planning and scheduling, resource identification and management, risk management support, earned value management, configuration management, business readiness (formerly change management), and related administrative tasks.

- Provide primary or back-up roles identified in LaRC's Operations Level Agreements with the NASA Enterprise Applications Competency Center (NEACC) to ensure that Agency applications are supported at the Center level. These roles include:

  - Provide technical support of the IEM modules that are in production.

  - Provide Center Business Process lead (CBPL) support with liaison responsibility to the NEACC. Responsibilities include supporting year-end and start-up activities, assisting the NEACC and users in troubleshooting problems, and administering WebTADS, NASA Structure Management (NSM), and Metadata Manager (MdM).

  - Provide information delivery (report) support. Provide process knowledge to support end-users with existing reports, as well as, design and develop additional reports or queries as requested.

  - Support the monthly cost assessment process by executing process steps in SAP.

- Design, develop, and revise training materials for systems and applications. Schedule classes, arrange logistics for classes, conduct training, validate training effectiveness, track and report training metrics, and provide information for input to student records.

- Create, advise on, or maintain processes that contribute to and monitor the health of financial information and the underlying financial systems.

- Ensure data quality is maintained throughout the key business systems and applications.

- Provide product maintenance, technical support, and customer support to each of the OCFO websites and applications. As part of the standard maintenance service, the contractor shall proactively monitor the applications/sites for service interruptions and functional anomalies.

- Serve as the primary and backup LaRC OCFO LIFE Website Manager.

- Provide support for Retired Systems such as Time and Distribution System (TADS), Electronic Purchase Request System (EPRS) , Financial Management System (FMS, Financial Core, Fixed Assets, Job Order, and Invoice Payment), and Labor Distribution System (Manpower).

6.14. Airspace and Traffic Operations Simulation (ATOS) Development and Enhancements

The objective of this task is to develop and enhance NASA-Langley Research Center's (NASA-LaRC) Airspace and Traffic Operations Simulation, including methodologies to enable research experiments in support of future air transportation system concepts and technologies such as those currently being explored by NASA's Airspace Systems Program projects (NextGen Airspace and NextGen Airportal). Tasks will explore new methodologies for the development and enhancement of distributed airborne simulation tools, design and develop new engineering models of revolutionary and enabling airborne technologies, integrate these new simulation tools and engineering models into the ATOS, and aid in the conduct of simulations (including experiment design, data analysis, and reporting) in the Air Traffic Operations Lab (ATOL). The overarching goal is to produce and maintain an integrated, operational, and productive Air Traffic Management (ATM) research tool that also incorporates capabilities for transitioning to simulations of airport surface operations.

Numerous research goals will be met through studies and experiments conducted using the ATOS (hosted in the Air Traffic Operations Lab, or ATOL, at LaRC) as well as with other simulation tools that may be linked to the ATOS for specific experiments. These research goals, many of which require new capabilities, include (but are not limited to) the following: (1) evaluating the impact of uncertainties, real-world system behaviors, weather, and human factors on the safety and performance of airborne trajectory management applications; (2) developing new 4D dynamic Required Navigation Performance (RNP) capabilities and determining how they may affect the performance of various airborne applications integrated with ground-based operations; (3) creating new metrics for dynamic airspace complexity and evaluating the effects of various distributed complexity-mitigation functions and en-route coordination strategies; and (4) evaluating different algorithms and procedures for super-density terminal area merging and spacing applications. In the area of airport surface operations, research goals include: (1) evaluating Collision Avoidance for Airport Traffic (CAAT) algorithms in the low altitude, runway, and taxiway operating environment; (2) evaluating integrated aircraft-based CAAT and ground-based taxi conformance monitoring and longer term collision detection and resolutions solutions; and (3) developing and evaluating algorithms and procedures to

maximize airport arrival and departure capacity, including reduced in-trail separation requirements, closely-spaced and converging/intersecting runway operations, and runway balancing.

Development, implementation, and integration of new simulation capabilities will be required to perform vital studies and experiments in support of planned research goals. These simulation capabilities generally fall into the following categories: (1) development of engineering models of advanced technologies that enable new concepts of operation, such as airborne four-dimensional (4D) trajectory & separation management, conflict detection and resolution (particularly with regards to loss of separation), terminal area merging and spacing, and in-trail procedures (oceanic and domestic) for enroute climbs and descents; (2) new 4D trajectory generation capability for the on-board flight management computer (FMC), including a common lexicon for the exchange of 4D trajectory data between various airborne and ground-based systems and applications; (3) advancements in the simulation of the basic aircraft, including airframe and engine performance models and control laws; (4) improvements to fundamental simulation control functions, including timing, mode transitions, and scenarios, that support the full range of experiment types from real-time human-in-the-loop studies to large-scale batch runs; and (5) evaluation of algorithms and procedures for airport arrival and departure operations.

A major aspect of ATOS enhancement is the continued development, implementation and integration of an enhanced onboard automation system that supports flight-crew decision-making for airborne trajectory and separation management. This capability is used to conduct simulation-based research of advanced ATM concepts that involve distributed responsibility for ATM functions such as traffic separation, airspace hazard avoidance, trajectory constraint meeting, and airspace complexity management. This capability is intended to allow studies of multi-aircraft interactions in a distributed-control architecture. Of particular interest is the safety of distributed control under the wide variety of conflict geometries and causal factors that can arise. To support a quantitative analysis of safety, functions must be made sufficiently robust for testing in batch mode over many thousands of runs and under a wide variety of scenarios and test conditions. Also of interest are new functions considered for distribution, such as trajectory flexibility preservation and constraint minimization, which must be integrated with other functions and tested for feasibility. Such functions will allow studies of distributed management of traffic complexity, a proactive approach to reducing safety risk in multi-aircraft scenarios.

Requirements specific to this work area include:

- Develop, test, and integrate new software capabilities, as well as software modifications, within and across ATOS subsystems, required to meet simulation capability and experiment needs for ongoing research;

- Perform configuration management tasks to maintain the ATOS software baseline;

- Integrate ATOS software with production hardware in the ATOL;

- Perform regression testing of ATOS software development builds;

- Provide enhancements to adapt to evolving research requirements;

- Determine best experimental methodologies for posed research questions;

- Develop enabling technology (engineering) models of advanced airborne technologies supporting trajectory planning and guidance;

- Determine appropriate level of modeling fidelity for each aspect of the ATOS' component subsystems, including but not limited to aircraft performance, CNS (Communication., Navigation and Surveillance) infrastructure, and the operating environment (including air traffic and airport surface scenarios);

- Support the exploration of large-scale effects of multi-aircraft interactions in the proposed NextGen concepts of operation, especially between aircraft of significantly different performance characteristics;

- Develop advanced traffic generation capabilities that include real-time background target generation for ATOS scenarios, fast-time stand-alone simulation capability for batch studies, tools for scenario design and prototyping, and data recording;

- Model typical pilot behaviors while interacting with new ATM research tools;

- Improve connectivity with other simulation tools and facilities;

- Provide functional description documentation for all software components;

- Document operating instructions.

LITES Contract Documentation Requirements

Exhibit B

RFP NNL10276610R

EXHIBIT B

CONTRACT DOCUMENTATION REQUIREMENTS

I.   DOCUMENTATION PREPARATION/SUBMISSION INSTRUCTIONS

The Contractor shall prepare and submit the following data documentation as required by the Contract and Section J, Exhibit A, Statement of Work.

I. DOCUMENTATION REQUIREMENTS

A. 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 contract, a 533M for each authorized cost reimbursement task order shall be provided. If specified in the Task Order, the Contractor shall report costs by Government WBS identifier (number). The 533M shall include for the levels indicated below:

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

b. Due not later than the 10th working day following the close of the Contractor's accounting period being reported.

 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 +-10 percent between estimated dollars shown in the prior month and actual dollars shown in the current month at the task order 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 past performance evaluation.

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

a. Direct Labor Hours

b. Direct Labor Dollars

c. Overhead(s)

d. Subcontract

e. Material

f. Other Direct Cost

g. G&A

h. Total Estimated Cost

i. Fee

j. Total Estimated Cost and Fee

B.   Monthly Technical Status Report: The Contractor shall submit monthly technical status reports for each task order describing progress of the task order 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 monthly progress report shall be submitted within 10 working days after the end of each calendar monthly report period.

C.   Monthly Financial Management Report: The Contractor shall submit monthly financial management reports for each task order providing Purchase Request numbers, WBS, estimate to complete, and estimate at completion on a task-by-task basis (and at the subtask level if applicable), and shall allow for export of the data into MS Office Suite applications for Government users.

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. Accident/Incident Safety Reports: The Contractor shall submit accident/incident reports to the LaRC Safety and Facility Assurance Branch (SFAB) within 10 working days after the end of each month. The Safety Report shall include the number of employees, hours worked on the contract, number of fatalities, lost time cases, restricted work day cases, number of lost/restricted work days, OSHA recordable incidents and first aid cases relative to the past month. NOTE: The NASA LaRC SFAB has developed a web-based system entitled

Contractor Monthly Accident Reporting (CMAR) located at http://cmar.larc.nasa.gov/login.cfm for support service contractor working on-site or within the LaRC firewall. If you able and choose to submit your information electronically via CMAR, no additional hard-copy reports are required.

F. Notice of Violation Response: The Contractor shall respond to any Notice of Violation (NOV) issued for safety violations to the prime and/or its' subcontractors. The response shall include the cause for violation; mitigation of impact, if applicable; and planned prevention of recurrence. Response shall be submitted to the issuer of the NOV and SFAB within three working days of issuance.

G. Occupational Injuries/Illnesses Report: The Contractor shall submit an annual summary of occupational injuries and illnesses to the Occupational Safety and Health Administration (OSHA) as described in 29 CFR Part 1904.32. (If contractor is exempt by regulation from maintaining and publishing such logs, equivalent reporting in the contractor's format is acceptable.) This report is due within 45 working days after the end of the calendar year and shall be posted in accordance with OSHA regulations.

H. Safety and Health Plan: Per 1852.223-70(j) of the contract, the contractor is required to continually update the Safety and Health Plan when necessary (e.g., requirement change, safety regulation change, safety incident impact). The Contractor shall submit a revised Plan for Contracting Officer approval no later than 30 days after the effect of a change or incident.

I. Information Technology (IT) Security Plan - The Contractor shall submit the IT Security Plan required by contract clause NFS 1852.204-76 Security Requirements for Unclassified Information Technology Resources for Contracting Officer approval no later than 30 calendar days after award.

J. Information Technology (IT) Security Management Plan: The Contractor shall submit the IT Security Management Plan for Contracting Officer approval no later than 30 calendar days after award.

K. 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, 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 30th 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.

L. 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.

M. Documentation for Transferring Property to the Government:

In accordance with the NFS clause 1852.245-71, Installation- Provided Government Property clause of this contract, accountability for that property which is acquired for the Government under this contract shall be passed to the Government using the following procedure:

The transfer of accountability shall be initiated by the Contractor submitting a Requisition and Invoice/Shipping Document, DD Form 1149, accompanied by a copy of the Contractor's applicable purchasing and receipt document for the property. The Contractor shall insert both the Contractor's Subcontract/ Purchase Order number and the Government contract number on the DD Form 1149 under the Federal Stock Number, Description, and Coding of Material and/or Services block. For purchases of supplies and materials, this document shall be submitted within 30 calendar days after the end of each calendar-year quarter (that is, not later than January 30, April 30, July 30, and October 30). For equipment purchases, the DD 1149 shall be submitted within five working days after acceptance of each item of equipment by the Contractor. Receipt by the Contractor of a copy of the DD Form 1149 signed by the Government relieves the Contractor of accountability for the property specified on that form.

N. 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.

O. Quality Plan: Revisions to the plan will be reviewed and approved by the Contracting Officer or the designated representative.

P. CMMI Appraisal Results: The Contractor shall submit the results of Standard CMMI Appraisal Method for Process Improvement (SCAMPI) Class A appraisals against the CMMI model in accordance with Contract Clause H.12 or H.13 as applicable. The SCAMPI appraisal results shall include the items listed under the Appraisal Disclosure Statement in

Appendix A of the Software Engineering Institute Handbook:
http://www.sei.cmu.edu/pub/documents/02.reports/pdf/02hb002.pdf

Q. **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.

R. Evidence of Insurance: The Contractor shall submit evidence of the insurance coverage, required by the Section I, NFS Clause 1852.228-75 Minimum Insurance Coverage, (i.e., a Certificate of Insurance or other confirmation), to the Contracting Officer prior to performing under this contract. The Contractor shall also present such evidence to the Contracting Officer prior to commencement of performance under any options exercised, if applicable.

S. 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.

T. Final New Technology Report - The Contractor shall submit a list of subject inventions or certify that 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.

U. 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.

V. On and Near-Site Staffing Report: The contractor shall submit a report which includes the number of on-site and near- site Work Year Equivalents (WYE's) performing work on the contract, broken down by skill category. An initial report shall be submitted within 30 calendar days from the effective date/contract award date of the contract. Subsequent updated reports are due quarterly, on January 1, April 1, July 1 and October 1 of each year.

These reports shall be e-mailed to the following: contractorwye@larc.nasa.gov The subject line for the e-mail should be "Contractor WYE".

"On-site" WYE's include the time worked by prime contractor and subcontractor employees on this contract whose primary duty station is on-site at Langley Research Center, and who charge direct in the contractor's or subcontractor's accounting systems.

"Near-site" WYE's include the time worked by prime contractor and subcontractor employees on this contract whose primary duty station is within 50 miles of LaRC and who charge direct

in the contractor's or subcontractor's accounting systems.   Work performed on local college campuses shall not be considered "near site" WYE's.

The contractor shall use the number of hours in its productive work year to compute the number of WYE's to be reported.

The contractor shall break out the On-site and Near-site WYE by skill category using the following categories: Scientist, engineer, technician, administrative professional, and clerical.

W. Organizational Conflicts of Interest (OCI) Avoidance Plan: The Contractor shall submit a comprehensive OCI Avoidance Plan within 30 calendar days after the contract award date. 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.

X. Electronic Task Order System: The Contractor shall deliver a data schema and data definition table within 30 days after contract start date.   If any changes throughout the contract performance period to the ETOS application require a new data schema and data definition table, the contractor shall deliver the new data schema and data definition table. Also, at contract end, or by Government request at any point during the contract performance, the Contractor shall deliver a complete data file containing all task data for the period of performance in a file format compatible with either an Oracle database or standard relational database format. Any portions of ETOS developed at Government expense shall be delivered by the Contractor with unlimited rights under FAR 52.227-14 as modified by NFS 1852.227-14.

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: , Mail Stop   Contract NNL0# 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 148

3. C--New Technology Representative, Mail Stop 148

4. D--Financial Management, NF533@larc.nasa.gov

5. E--Safety and Facility Assurance Branch, Mail Stop 350 or fax
757-864-8918 or CMAR http://cmar.larc.nasa.gov/login.cfm

6. F--Contractor Labor Relations Officer, Mail Stop 144

7. G--Financial Management, Mail Stop 175

8. H--Patent Counsel, Mail Stop 141

9. I--Industrial Property Officer, Mail Stop 377

10. J--Small Business Specialist, Mail Stop 134

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

12. L--According to instructions on form

13. M--As required by TO

14. N--Task Monitor

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

16. P--Center STI Publication Manager, Mail Stop 196

17. Q--Industry Assistance Representative, Mail Stop 144

18. R--On and Near-Site Staffing Report, contractorwye@larc.nasa.gov

19. S--Environmental Management Team, Mail Stop 213

20. T—CMMI Representative, Mail Stop 237

21. U-- Field Analysts – as required by TO

22. V-- Resource Analysts – as required to TO

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:

LETTER CODE AND DOCUMENT: DISTRIBUTION

1. Financial Management Report (NASA Forms 533M & 533Q): A-1, B- 2, D-1, G-1

2. Monthly Technical Status Report: A-1, B-1, M-1, N-1

3. Monthly Financial Management Report: A-1, B-1, N-1, U-1, V-1

4. New Technology Report: A-1, B-1, C-1, H-1

5. Collective Bargaining Agreement: A-1, B-1, F-1

6. Report of Property in the Custody of Contractors (NASA Form 1018): G-1, I-1, L

7. Subcontracting Report for Individual Contracts (Standard Form 294): A-1, J-1, Q-1, L (if the eSRS is NOT used)

8. Summary Subcontractor Report (Standard Form 295): L

9. Requisition and Invoice/Shipping Document (DD Form 1149): I- 1

10. Federal Contractor Veterans Employment Report (VETS-100): L

11. Quality Plan: A-1, B-1, O-1

12. Quality System Documents: A-1, B-1, O-1

13. Accident/Incident Safety Reports: E-1

14. Occupational Injuries/Illnesses Report: E-1

15 Safety and Health Plan Revisions: A-1, B-1, E-1

16. Notice of Violation Responses: E-1, issuer of NOV

17. IT Security Plan: A-1, B-1, K-1

18. IT Security Implementation Plan: A-1, B-1, K-1

19. Annual IT Security Training Report: K-1

20. Informal Final Report: A-1, B-2, C-1, H-1,

21. Formal Final Report: As specified by the Contracting Officer

22. Copy of formal final report cover letter: P-1

23. On and Near-Site Staffing Report: A-1, B-1, R-1

24. OCI Avoidance Plan: A-1, B-1

25. CMMI Appraisal Results: A-1, B-1, T-1

26. Electronic Task Order System Data Schema and Data Definition Table: 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 C - Schedule of Rates
LaRC Information Technology Enhanced Services
Contract Year 5

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LaRC Information Technology Enhanced Services
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Instructions:

(1)

LITES

Personal Identity Verification (PIV) Card Issuance Procedures

Exhibit E

PERSONAL IDENTITY VERIFICATION

Personal Identity Verification (PIV) Card Issuance Procedures In Accordance With Far Clause 52.204-9 (Jan 2006), Personal Identity Verification Of Contractor Personnel, And Procurement Information Circular (PIC) 06-01 (January 18, 2006), Personal Identity Verification Of Contractors

Federal Information Processing Standard (FIPS) 201 Appendix A graphically displays the following procedure for the issuance of a PIV credential.
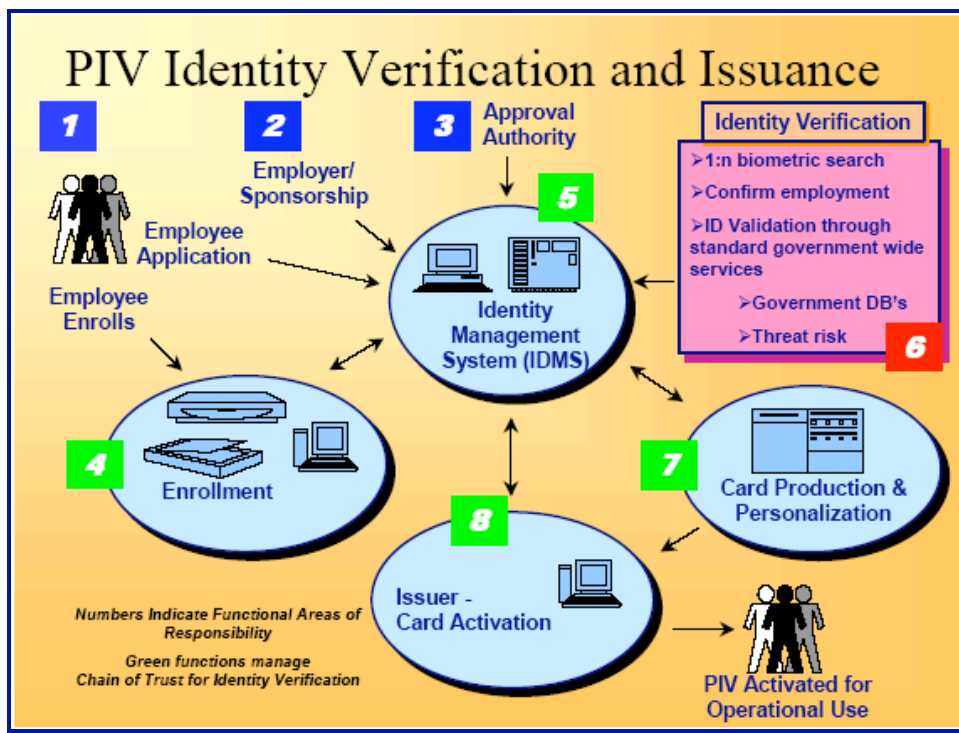
Figure A-1, FIPS 201, Appendix A

The following steps describe the procedures for the NASA Personal Identity Verification Card Issuance (PCI) of a PIV credential:

Step 1: The Contractor's Corporate Security Officer (CSO), Program Manager (PM), or Facility Security Officer (FSO) submits a formal letter that provides a list of contract employees (applicant) names requesting access to the NASA Contracting Officer's Technical Representative (COTR). In the case of a foreign national applicant, approval through the NASA Foreign National Management System (NFNMS) must be obtained for the visit or assignment before any processing for a PIV credential can take place. Further, if the foreign national is not under a contract where a COTR has been officially designated, the foreign national will provide the information directly to their visit/assignment host, and the host sponsor will fulfill the duties of the COTR mentioned herein. In each case, the letter shall provide notification of the contract or foreign national employee's (hereafter the "applicant") full name (first, middle and last), social

security number (SSN) or NASA Foreign National Management System Visitor Number if the foreign national does not have a SSN, and date of birth. If the contract employee has a current satisfactorily completed National Agency Check with Inquiries (NACI) or an equivalent or higher degree of background investigation, the letter shall indicate the type of investigation, the agency completing the investigation, and date the investigation was completed. Also, the letter must specify the risk/sensitivity level associated with the position in which each applicant will be working (NPR 1600.1, §4.5 is germane) Further, the letter shall also acknowledge that contract employees may be denied access to NASA information or information systems based on an unsatisfactory background investigation/adjudication.

After reviewing the letter for completeness and concurring with the risk/sensitivity levels, the COTR/host must forward the letter to the Center Chief of Security (CCS). The CCS shall review the OPM databases (e.g., DCII, PIP, et al.), and take appropriate steps to validate the applicant's investigation status. Requirements for a NACI or other investigation shall be initiated only if necessary.

Applicants who do not currently possess the required level of background investigation shall be directed to the e-QIP web site to complete the necessary background investigation forms online. The CCS shall provide to the COTR/host information and instructions on how to access the e-QIP for each contract or foreign national employee requiring access.

Step 2: Upon acceptance of the letter/background information, the applicant will be advised that in order to complete the investigative process, he or she must appear in-person before the authorized PIV registrar and submit two forms of identity source documents in original form. The identity source documents must come from the list of acceptable documents included in Form I-9, Employment Eligibility Verification, one which must be a Federal[1] or State issued picture identification. Fingerprints will be taken at this time. The applicant must appear **no later than** the entry on duty date.

When the applicant appears, the registrar will electronically scan the submitted documents; any document that appears invalid will be rejected by the registrar. The registrar will capture electronically both a facial image and fingerprints of the applicant. The information submitted by the applicant will be used to create or update the applicant identity record in the Identity Management System (IDMS).

Step 3: Upon the applicant's completion of the investigative document, the CCS reviews the information, and resolves discrepancies with the applicant as necessary. When the applicant has appeared in person and completed fingerprints, the package is electronically submitted to initiate the NACI. The CCS includes a request for feedback on the NAC portion of the NACI at the time the request is submitted.

Step 4: Prior to authorizing physical access of a contractor employee to a federally-controlled facility or access to a Federal information system, the CCS will a National Crime Information Center (NCIC) with an Interstate Identification Index check is/has been performed. In the case of a foreign national, a national check of the Bureau of Immigration and Customs Enforcement (BICE) database will be performed for each applicant. If this process yields negative

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[1] A non-PIV government identification badge, including the NASA Photo Identification Badge, MAY NOT BE USED for the original issuance of a PIV vetted credential.

information, the CCS will immediately notify the COTR/host of the determination regarding access made by the CCS.

Step 5: Upon receipt of the completed NAC, the CCS will update IDMS from the NAC portion of the NACI and indicate the result of the suitability determination. If an unsatisfactory suitability determination is rendered, the COTR will advise the contractor that the employee is being denied physical access to all federally-controlled facilities and Federal information systems.

Based on a favorable NAC and NCIC/III or BICE check, the CCS will authorize the issuance of a PIV federal credential in the Physical Access Control System (PACS) database. The CCS, based on information provided by the COTR/host, will determine what physical access the applicant should be granted once the PIV issues the credential.

Step 6: Using the information provided by the applicant during his or her in-person appearance, the PIV card production facility creates and instantiates the approved PIV card for the applicant with an activation date commensurate with the applicant's start date.

Step 7: The applicant proceeds to the credential issuance facility to begin processing for receipt of his/her federal credential.

The applicant provides to the credential issuing operator proof of identity with documentation that meets the requirements of FIPS 201 (DHS Employment Eligibility Verification (Form I-9) documents. These documents **must** be the same documents submitted for registration.

The credential issuing operator will verify that the facial image, and optionally reference finger print, matches the enrollment data used to produce the card. Upon verification of identity, the operator will locate the employee's record in the PACS database, and modify the record to indicate the PIV card has been issued. The applicant will select a PIN for use with his or her new PIV card. Although root data is inaccessible to the operator, certain fields (hair color, eye color, et al.) may be modified to more accurately record the employee's information.

The applicant proceeds to a kiosk or other workstation to complete activation of the PIV card using the initial PIN entered at card issuance.

ALTERNATIVE FOR APPLICANTS WHO DO NOT HAVE A COMPLETED AND ADJUDICATED NAC AT THE TIME OF ENTRANCE ON DUTY

Steps 1 through 4 shall be accomplished for all applicants in accordance with the process described above. If the applicant is unable to appear in person until the time of entry on duty, or does not, for any other reason, have a completed and adjudicated NAC portion of the NACI at the time of entrance on duty, the following interim procedures shall apply.

Interim Procedure 1: If the documents required to submit the NACI have not been completed prior to EOD, the applicant will be instructed to complete all remaining requirements for submission of the investigation request. This includes presentation of I-9 documents and completion of fingerprints, if not already accomplished. If the applicant fails to complete these activities as prescribed in NPR 1600.1 (Chapters 3 & 4), it may be considered as failure to meet the conditions required for physical access to a federally-controlled facility or access to a Federal information system, and result in denial of such access.

Interim Procedure 2: Based on favorable results of the NCIC, the applicant shall be issued a temporary NASA identification card for a period not-to-exceed six months. If at the end of the six month period the NAC results have not been returned, the agency will at that time make a determination if an additional extension will be granted for the temporary identification card.

Interim Procedure 3: Upon return of the completed NAC, the process will continue from Step 5.

Labor Category	Knowledge/Skills/Capabilities
Project Analyst	Provides project management leadership support for NASA projects: a) Provides applications systems analysis and programming activities. b) Prepares long and short-range project plans for application selection, systems development, systems maintenance, and production activities and for necessary support resources. c) Provides support for all aspects of projects. d) Applies knowledge of concepts in particular research fields. e) Master or Senior leads team on large projects or significant segment of large complex projects and analyzes new and complex project related problems and creates innovative solutions involving finance, scheduling, technology, methodology, tools, and solution components.
Computer Scientist	Provides computer science expertise for projects in support of mission and mission-support organizations: a) Acts as a consultant to projects in support of complex or mission critical client requirements. b) Develops, modifies, and applies computer modeling and programming applications to analyze and solve mathematical, scientific, and business problems affecting system and program performance. c) Participates in IT support to all phases of scientific and engineering and mission-support projects, such as research, design, development, testing, modeling, simulating, training, and documentation.
Applications Systems Analyst	Provides systems analysis for projects in support of mission and mission-support organizations: a) Formulates/defines system scope and objectives. b) Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations, operating time, and form of desired results. c) Prepares detailed specifications for software programs. Assists in the design, development, testing, implementation, and documentation of new software and enhancements of existing applications. d) Supports project managers, developers, and end users to ensure application designs meet requirements. e) Formulates/defines specifications for complex operating software programming applications or modifies/maintains complex existing applications using engineering releases and utilities from the manufacturer.

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	f) Designs, codes, tests, debugs, and documents programs. g) Provides overall operating system, such as sophisticated file maintenance routines, large telecommunications networks, computer accounting, and advanced mathematical/scientific software packages. h) Assists all phases of software systems programming applications. i) Evaluates new and existing software products for use in support of client projects.
System Administrator	Provides system administration support to all functions involving a homogeneous or heterogeneous computing environment (Solaris, Unix/Linux, Windows, Macintosh), including: a) Develops scripts, installs software and hardware and upgrades, troubleshoots, manages user accounts, performs network coordination, implements security controls and software including TCP wrappers, host-based firewalls, backup/recovery, and disaster/recovery. b) Implements computer security controls and supports the certification and accreditation process. c) Supports peripheral equipment associated with an integrated computing environment. d) Provides end-user support on a variety of issues. e) Provides systems modification recommendations to optimize functionality of systems. f) Applies knowledge of concepts in particular research fields. g) Maintains data files and monitors system configuration to ensure data integrity. h) Possesses and maintains formal certifications appropriate to the applicable tasks.
Computer Operator	Monitors and operates the control console of either a mainframe digital computer or a group of minicomputers, in accordance with operating instructions, to process data. a) Studies operating instructions and determines required equipment setup. b) Loads equipment with required items (tapes, cards, paper, etc.). c) Switches necessary auxiliary equipment into system. d) Diagnoses and corrects equipment malfunctions. e) Reviews error messages and makes corrections during operation or refers problems. f) Maintains operating record. g) May test run new or modified programs and assists in modifying systems or programs.

	h) Master level operator uses more complex systems and deviates from standard procedures in response to non-standard output. Master level may spend time away from operations providing technical assistance to lower level operators and assisting programmers, systems analysts, and subject matter experts with resolution of problems.
Database Administrator	Provides database administration for projects in support of mission and mission-support organizations: a) Provides all activities related to the administration of computerized databases. b) Projects long-range requirements for database administration and design in conjunction with other managers in the information systems function. c) Designs, creates, and maintains databases in a client/server environment. d) Conducts quality control and auditing of databases in a client/server environment to ensure accurate and appropriate use of data. e) Advises users on access to various client/server databases. f) Designs, implements, and maintains complex databases with respect to JCL, access methods, access time, device allocation, validation checks, organization, protection and security, documentation, and statistical methods. g) Applies knowledge and experience to relational databases (both commercial and open source), database management, and database administration for SQL database systems including Oracle and MySQL. Performs database programming and supports systems design. h) Performs maintenance of database dictionaries, overall monitoring of standards and procedures, file design and storage, and integration of systems through database design.
Database Analyst	Provides database analysis for projects in support of mission and mission-support organizations: a) Designs and builds relational databases. Performs data access analysis design, and archive/recovery design and implementation. b) Develops strategies for data acquisitions, archive recovery, and implementation of a database. c) Works in a data warehouse environment, which includes data design, database architecture, and metadata repository creation. d) Translates business needs into long-term architecture solutions.

	e) Defines, designs, and builds dimensional databases. f) Develops data warehousing blueprints, evaluating hardware and software platforms, and integrating systems. g) Reviews and develops object and data models and the metadata repository to structure the data for better management and quicker access.
Applications Developer	Provides application development for projects in support of mission and mission-support organizations: a) Designs programming applications from requirements to execution; lays out data structure, optimizes code b) Designs, develops, enhances, debugs, and implements software. Troubleshoots production problems related to software applications. c) Researches, tests, builds, and coordinates the conversion and/or integration of new products based on client requirements. Designs and develops new software products or major enhancements to existing software. d) Addresses problems of systems integration, compatibility, and multiple platforms. e) Consults with project teams and end users to identify application requirements. f) Performs feasibility analysis on potential future projects to management. g) Assists in the evaluation and recommendation of application software packages, application integration and testing tools. h) Resolves problems with software and responds to suggestions for improvements and enhancements. i) Acts as team leader on projects. j) Instructs, assigns, directs, and checks the work of other software developers on development team. k) Participates in development of software user manuals.
Web Application Administrator	Provides web application administration for projects in support of mission and mission-support organizations: a) Designs and builds web pages using a variety of graphics software applications, techniques, and tools. b) Designs and develops user interface features, site animation, and special-effects elements. Contributes to the design group's efforts to enhance the look and feel of the organization's online offerings. c) Designs website to support client strategies and goals relative to external communications. d) Designs, develops, and implements software packages for web sites.

	e) Troubleshoots, debugs and implements software code. f) Applies knowledge of standard concepts, practices, and procedures within a particular field (i.e., SQL, C++, HTML, CGI and JavaScript). g) Applies creativity and innovation to meet challenging web application requirements.
Programmer	Performs programming services for projects in support of business, science, and research requirements: a) Converts specifications (precise descriptions) about business or scientific problems into a sequence of detailed data processing instructions to solve problems. b) Draws program flow charts to describe the processing of data, and develops the precise steps and processing logic which, when entered into the computer in coded language to cause the manipulation of data to achieve desired results. c) Tests and corrects programs, prepares instructions for operators who control the computer during runs, modifies programs to increase operating efficiency or to respond to changes in work processes, and maintains records to document program development and revisions. d) Gathers facts from users to define their business or scientific problems and investigates the feasibility of solving problems through new or modified computer programs; develops specifications for data inputs, flow, actions, decisions, and outputs; and participates on a continuing basis in the overall program planning along with other data processing personnel and users. e) At the Master level: Performs some programming analysis as part of the programming assignment. Recommends the redesign of programs, investigates and analyzes feasibility and program requirements, and develops programming specifications; applies expertise in programming procedures to complex programs. f) At the Senior level: Solves conventional programming problems. Monitors the operation of assigned programs and responds to problems by diagnosing and correcting errors in logic and coding; implements and /or maintains assigned portions of a scientific programming project, applying established scientific programming technique to well-defined mathematical , statistical, engineering, or other scientific problems. g) At the Journeyman level: Performs routine programming assignments that require knowledge of established

	programming procedures and data processing requirements, and works according to clear-cut and complete specifications. h) At the Junior level: Performs elementary programming tasks which concern limited and simple data items and steps which closely follow patterns. Performs routine programming assignments.
Subject Matter Expert	Provides subject matter expertise for projects in support of mission and mission-support organizations: a) Serves as subject matter expert, possessing in-depth knowledge of a particular area, such as business, project management, computer science, engineering, mathematics, or the various sciences. b) Provides technical knowledge and analysis of highly specialized applications and operational environments, high-level functional systems analysis, design, integration, documentation, and implementation advice on exceptionally complex problems that need extensive knowledge of the subject matter for effective implementation. c) Participates as needed in all phases of software development with emphasis on the planning, analysis, testing, integration, documentation, and presentation phases. d) Provides technical knowledge and analysis of laws, policies, and regulations germane to the task supported. e) Applies principles, methods and knowledge of the functional area of capability to specific task order requirements, advanced mathematical principles and methods to exceptionally difficult and narrowly defined technical problems in engineering and other scientific applications to arrive at automated solutions.
IT Security Analyst	Provides IT security expertise for projects in support of mission and mission-support organizations: a) Applies knowledge of computer and network forensics. b) Conducts vulnerability assessments/penetration tests of information systems. c) Develops researches and maintains proficiency in tools, techniques, countermeasures, and trend in computer and network vulnerabilities, data hiding, and encryption. d) Identifies, deters, monitors, and investigates computer and network intrusions. e) Provides computer forensic support to high technology investigations in the form of evidence seizure, computer forensic analysis, and data recovery.

	f) Implements information security standards and procedures.
	g) Provides tactical information security advice and examines the ramifications of new technologies.
	h) Ensures that all information systems are functional and secure.
Geographic Information System (GIS) Analyst/Programmer	Provides GIS analysis/programming for projects in support of mission and mission-support organizations: a) Demonstrates proficiency in GIS and related systems analysis and data modeling (including but not limited to RDBMS, CAD,BIM). b) Demonstrates and maintains proficiency with current and developing technologies and software related to spatial data maintenance and analysis. c) Coordinates, manages, administers, and develops the spatial data systems and associated tools. d) Develops various types of GIS maps and related data sets. e) Designs and implements GIS analytical procedures. f) Performs analysis and maintenance of GIS systems. g) Maintains proficiency in related areas such as geodesy, bathometry and tidal references, aerial photography and Lidar, utility and facility networks, and modeling of building interior spaces.
Data Acquisition Specialist	Provides data acquisition expertise for projects in support of mission and mission-support organizations: a) Programs, trouble-shoots, and operates complex hardware using control software. b) Integrates software and hardware for equipment with multiple subsystems that must be coordinated and controlled simultaneously. c) Develops, integrates, tests, trouble-shoots, and supports testing of data acquisition systems and controls. d) Designs operator interfaces for functional hardware operations e) Provides test support and real-time software operation and modification in the lab and in remote simulated mission environments f) Provides calibration of test equipment. g) Provides data acquisition using various test equipment and measurement instruments. h) Provides post test processing and analysis of test data.
Technician	Provides technical support for projects in support of mission and mission-support organizations. Technicians have and apply knowledge, skills, and/or experience in one or more of the

Technician	Provides technical support for projects in support of mission and mission-support organizations. Technicians have and apply knowledge, skills, and/or experience in one or more of the following: a) Performing a variety of analyses and prepares appropriate documentation. b) Installing, operating, maintaining, configuring, troubleshooting, and repairing IT systems, devices, circuits, cables, components, software, and connectivity, including Unix/Linux servers, and hardware required to access remote servers. c) Assisting in the development and management of project plans. d) Managing computer operations, including print and job execution queue management. e) Acquiring and managing customer requirements. f) Utilizing network engineering principles. g) Possesses and maintains formal accreditations (e.g. CNE, MSCE) appropriate to particular tasks.
Help Desk Specialist	Provides help desk support for projects in support of mission and mission-support organizations: a) Responds to and diagnoses problems through discussion with users. b) Ensures a timely process through which problems are controlled. Includes problem recognition, research, isolation, resolution, and follow-up steps. c) Supervises operation of help desk and serves as focal point for customer concerns. d) Provides support to end users on a variety of issues. e) Identifies, researches, and resolves technical problems. f) Responds to telephone calls, email and personnel requests for technical support. g) Documents, tracks, and monitors the problem to ensure a timely resolution. h) Provides second-tier support to end users for either PC, server, or mainframe applications or hardware. i) Interacts with network services, software systems engineering, and/or applications development to restore service and/or identify and correct core problem. j) Simulates or recreates user problems to resolve operating

The following levels define the skills, education, and years and levels of experience and managerial capabilities for each labor category shown above. For education, degree

should be in Computer Science, Computer Engineering, Engineering, Mathematics, Physical Sciences, Information Management Systems, Geographic Information Systems, or other field appropriate to the task.

Master: Provides technical/management leadership on major tasks or technology assignments. Establishes goals and plans that meet project objectives. Has and applies domain and expert technical knowledge. Directs and controls activities that support client requirements, having overall responsibility for financial management, methods, and staffing to ensure that technical requirements are met. Interactions involve client negotiations and interfacing with senior management. Decision making and domain knowledge may have a critical impact on overall project implementation. May supervise others. Typically has at least a BS/BA degree and 10 years of experience in progressively complex assignments.

Senior: Possesses and applies a comprehensive knowledge across key tasks and high impact assignments. Plans and leads major technology assignments. Evaluates performance results and recommends major changes affecting short-term project growth and success. Functions as a technical expert across multiple project assignments. May supervise others. Typically has at least a BS/BA degree and 8 years of experience in progressively complex assignments.

Journeyman: Possesses and applies expertise on multiple complex work assignments. Assignments may be broad in nature, requiring originality and innovation in determining how to accomplish tasks. Operates with appreciable latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable. Typically has at least a BS/BA degree and 6 years of experience in progressively complex assignments.

Junior: Possesses and applies expertise on moderately complex work assignments. Assignments are focused and directed in nature, requiring minimal originality and innovation in determining how to accomplish tasks. Operates with some latitude in developing methodology and presenting solutions to problems. Contributes to deliverables and performance metrics where applicable. Typically has at least a BS/BA degree.

Entry-Level: Applies fundamental concepts, processes, practices, and procedures on work assignments. Possesses and applies expertise on basic work assignments. Assignments are focused and directed in nature. Performs work that requires practical experience and training. Contributes to deliverables and performance metrics where applicable. Work is performed under supervision. Typically has an AS/AA degree.