

PART I – THE SCHEDULE

SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS

B.1 FIRM FIXED PRICE (1852.216-78) (DEC 1988)

The total firm fixed price of this contract is \$ TBD.

(End of clause)

B.2 SUPPLIES AND/OR SERVICES TO BE PROVIDED

The Contractor shall provide all resources (except as may be expressly stated in the contract as furnished by the Government) necessary to deliver and/or perform the services below in accordance with the Statement of Work incorporated in Section J as Attachment 1, entitled “Shadow Mode Assessments using Realistic Technologies for the National Airspace System (SMART NAS).”

Item No.	Description	Unit	Firm Fixed Price
001	Shadow Mode Assessments using Realistic Technologies for the National Airspace System (SMART NAS), in accordance with Delivery and Payment Schedule, Section F.4	LT	\$ TBD
002	Travel to ARC and LaRC – Section F.4, total of <u>items 13a through 13i</u>	LT	\$ TBD
TOTAL FIRM FIXED PRICE			\$ TBD

(End of clause)

[END OF SECTION B]

SECTION C - DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

C.1 SPECIFICATION/ STATEMENT OF WORK

The Contractor shall provide the item or services specified in Section B in accordance with the following:

Statement of Work (SOW), entitled “Shadow Mode Assessments using Realistic Technologies for the National Airspace System (SMART NAS),” which is incorporated as in Section J as Attachment 1.

(End of text)

[END OF SECTION C]

SECTION D - PACKAGING AND MARKING

D.1 CLAUSES INCORPORATED BY REFERENCE -- SECTION D

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

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None Included By Reference

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18)

1852.211-70 PACKAGING, HANDLING, AND TRANSPORTATION (SEPT 2005)

(End of Clause)

[END OF SECTION D]

SECTION E - INSPECTION AND ACCEPTANCE

E.1 CLAUSES INCORPORATED BY REFERENCE -- SECTION E

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

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

52.246-7 INSPECTION OF RESEARCH AND DEVELOPMENT – FIXED PRICE (AUG 1996)

52.246-16 RESPONSIBILITY FOR SUPPLIES (APR 1984)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18)

None Included By Reference

(End of clause)

[END OF SECTION E]

SECTION F - DELIVERIES OR PERFORMANCE

F.1 CLAUSES INCORPORATED BY REFERENCE -- SECTION F

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

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

52.247-34 F.O.B. DESTINATION (NOV 1991)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18)

None Included By Reference

(End of clause)

F.2 PERIOD OF PERFORMANCE

The period of performance of this contract shall be twenty four (24) months from date of award.

(End of clause)

F.3 PLACE OF PERFORMANCE

The services to be performed under this contact shall be performed at the following location(s): the Contractor's facilities located at: TBD and at such other locations as may be directed by the Contracting Officer.

(End of clause)

F.4 DELIVERY AND PAYMENT SCHEDULE

The Contractor shall deliver and/or complete performance of the items required under this contract as follows:

	EVENT (in accordance with SOW requirements)	DUE DATE	ACCEPTANCE CRITERIA	FIRM FIXED PRICE PAYMENT AMOUNT
1	Kick-off meeting and deliver description of work plan development process.	15 days from award	Acceptance by COR and CO	\$ TBD
2	Deliver detailed work plan and briefing to NASA.	3 months from award	Acceptance by COR and CO	\$ TBD
3	Progress report including status of the deliverables, technical progress, technical and programmatic risks/issues, pictorial depictions, descriptions of architecture alternatives to date, cost estimation and benefits assessment.	6 months from award	Acceptance by COR and CO	\$ TBD
4	Progress report including status of the deliverables, technical progress, technical and programmatic risks/issues, pictorial depictions, descriptions of architecture alternatives to date, cost estimation and benefits assessment.	12 months from award	Acceptance by COR and CO	\$ TBD
5	Deliver detailed initial architectural alternatives including any pictorial depictions, diagrams and data integration, functionalities, input and output and interfaces for interaction, and prototype representation of architecture, and any source code developed. A briefing to NASA.	12 months from award	Acceptance by COR and CO	\$ TBD
6	Deliver cost and benefits assessment methodology for review and briefing to NASA.	15 months from award	Acceptance by COR and CO	\$ TBD
7	Progress report including status of the deliverables, technical progress, technical and programmatic risks/issues, pictorial depictions and descriptions of architecture alternatives to date.	18 months from award	Acceptance by COR and CO	\$ TBD
8	Deliver initial costs based on cost assessment methodology for architecture alternatives and briefing to NASA. Develop initial benefits assessment of SMART NAS.	22 months from award	Acceptance by COR and CO	\$ TBD
9	Deliver final detailed cost assessment of architectural alternatives and final benefits assessment of SMART NAS capability.	24 months from awards	Acceptance by COR and CO	\$ TBD
10	Deliver final report with a detailed description of architecture(s) with detailed functionality, data needs, interfaces, integration needs, plug and play capability, input and output, pictorial depictions and diagrams. The architecture alternatives should be described with associated costs, benefits, and technical feasibility. Contractor shall provide a briefing to NASA.	24 months from award	Acceptance by COR and CO	\$ TBD

11	Deliver data developed prototype architecture representation and/or software, in source code form, architecture description, functional descriptions, data input/output needs, integration needs, interfaces, design, diagrams, architecture design, and functionality, and documentation related to software use. Critical interface functionality for external data sources, execution hierarchy, internal communications and logged results must be demonstrated in a basic prototype to support the architecture.	24 months from award	Acceptance by COR and CO	\$ TBD
12	Final Patent Rights or New Technology Report - In accordance with FAR 52.227-11, Patent Rights—Ownership by the Contractor (as modified by NFS clause 1852.227-11); NFS 1852.227-70, New Technology; NFS 1852.227-72, Designation of New Technology Representative and Patent Representative; and Contract Data Requirements List.	Within 27 months from award	Acceptance by COR and CO and New Technology Representative	\$ TBD
SUBTOTAL Items 1 – 12 (also CLIN 001, Section B.2):				

TRAVEL TO ARC AND LARC:				
	EVENT (in accordance with SOW requirements. Does not include travel days.)	Dates	Acceptance	
13a	Travel to ARC (1 trip), per SOW – 2 working days, 2 persons each	15 days from award (Event 1)	Acceptance by COR and CO	\$
13b	Travel to ARC (1 trip), per SOW – 2 working days, 2 persons each	3 months from award (Event 2)	Acceptance by COR and CO	\$
13c	Travel to LaRC (1 trip), per SOW – 2 working days, 2 persons	6 months from award (Event 3)	Acceptance by COR and CO	\$
13d	Travel to ARC (1 trip), per SOW – 2 working days, 2 persons each	12 months from award (Event 4&5)	Acceptance by COR and CO	\$
13e	Travel to ARC (1 trip), per SOW – 2 working days, 2 persons each	12 months from award (Event 6)	Acceptance by COR and CO	\$
13f	Travel to LaRC (1 trip), per SOW – 2 working days, 2 persons	18 months from award (Event 7)	Acceptance by COR and CO	\$
13g	Travel to ARC (1 trip), per SOW – 2 working days, 2 persons each	22 months from award (Event 8)	Acceptance by COR and CO	\$
13h	Travel to ARC (1 trip), per SOW – 2 working days, 2 persons each	24 months from award (Event 9 & 11)	Acceptance by COR and CO	\$
13i	Travel to LaRC (1 trip), per SOW – 2 working days, 2 persons	24 months from awards (Event 10)	Acceptance by COR and CO	\$

	<u>Travel Subtotal - items 13a through 13i</u>	Travel subtotal (also CLIN 002, Section B.2:	
	Total Firm Fixed Price (Items 1 – 13i)		\$

(End of clause)

F.5 DELIVERY INSTRUCTIONS

(a) The Contractor shall ship the items required under this contract to:

NASA Ames Research Center
 PO Box 1
 Moffett Field, CA 94035-0001
 Marked for: TBD
 Email: TBD
 Contract Number: TBD
 Organization/Office Code: TBD
 Building No.: TBD

(b) Unless otherwise authorized in advance by the Contracting Officer, deliveries under this contract shall be made between the hours of 8:00a.m. and 5:00 p.m., Monday through Friday, excluding Federal holidays.

(c) Additional delivery instructions: None

(d) Additional marking instructions: None

(End of clause)

F.6 NOTICE OF DELAY (ARC 52.249-90) (FEB 1997)

If, because of technical difficulties, the Contractor becomes unable to complete the contract work at the time specified, notwithstanding the exercise of good faith and diligent efforts in performing the work called for under this contract, the Contractor shall give the Contracting Officer written notice of the anticipated delay and the reasons for it. The notice and reasons shall be delivered promptly after the condition creating the anticipated delay becomes known to the Contractor but in no event less than 45 days before the completion date specified in this contract, unless otherwise permitted by the Contracting Officer. When notice is given, the Contracting Officer may extend the time specified in the Schedule for such period as is deemed advisable.

(End of clause)

[END OF SECTION F]

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 CLAUSES INCORPORATED BY REFERENCE -- SECTION G

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

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None Included By Reference

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18)

1852.227-70 NEW TECHNOLOGY (MAY 2002) (*applies to other than small business, nonprofits, and flows down to large business subcontractors*)

1852.227-86 COMMERCIAL COMPUTER SOFTWARE--LICENSING (DEC 1987)

(End of clause)

G.2 DESIGNATION OF NEW TECHNOLOGY REPRESENTATIVE AND PATENT REPRESENTATIVE (1852.227-72) (JUL 1997)

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

New Technology Representative NASA Ames Research Center M/S 202A-3 (Code VP) Moffett Field, CA 94035-0001	Patent Representative NASA Ames Research Center M/S 202A-4 (Code DL) Moffett Field, CA 94035-0001
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(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquires or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This clause shall be included in any subcontract hereunder requiring a "New Technology" clause or "Patent Rights - Retention by the Contractor (Short Form)" clause, unless otherwise authorized or directed by the Contracting Officer. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.305-370 of the NASA FAR Supplement.

(End of clause)

G.3 TECHNICAL DIRECTION (1852.242-70) (SEP 1993)

(a) Performance of the work under this contract is subject to the written technical direction of the Contracting Officer's Technical Representative (COTR), who shall be specifically appointed by the Contracting Officer in writing in accordance with NASA FAR Supplement 1842.270. "Technical direction" means a directive to the Contractor that approves approaches, solutions, designs, or refinements; fills in details or otherwise completes the general description of work or documentation items; shifts emphasis among work areas or tasks; or furnishes similar instruction to the Contractor. Technical direction includes requiring studies and pursuit of certain lines of inquiry regarding matters within the general tasks and requirements in Section C of this contract.

(b) The COTR does not have the authority to, and shall not, issue any instruction purporting to be technical direction

that -

- (1) Constitutes an assignment of additional work outside the statement of work;
- (2) Constitutes a change as defined in the changes clause;
- (3) Constitutes a basis for any increase or decrease in the total estimated contract cost, the fixed fee (if any), or the time required for contract performance;
- (4) Changes any of the expressed terms, conditions, or specifications of the contract; or
- (5) Interferes with the Contractor's rights to perform the terms and conditions of the contract.

(c) All technical direction shall be issued in writing by the COTR.

(d) The Contractor shall proceed promptly with the performance of technical direction duly issued by the COTR in the manner prescribed by this clause and within the COTR's authority. If, in the Contractor's opinion, any instruction or direction by the COTR falls within any of the categories defined in paragraph (b) of this clause, the Contractor shall not proceed but shall notify the Contracting Officer in writing within 5 working days after receiving it and shall request the Contracting Officer to take action as described in this clause. Upon receiving this notification, the Contracting Officer shall either issue an appropriate contract modification within a reasonable time or advise the Contractor in writing within 30 days that the instruction or direction is -

- (1) Rescinded in its entirety; or
- (2) Within the requirements of the contract and does not constitute a change under the changes clause of the contract, and that the Contractor should proceed promptly with its performance.

(e) A failure of the Contractor and contracting officer to agree that the instruction or direction is both within the requirements of the contract and does not constitute a change under the changes clause, or a failure to agree upon the contract action to be taken with respect to the instruction or direction, shall be subject to the Disputes clause of this contract.

(f) Any action(s) taken by the Contractor in response to any direction given by any person other than the Contracting Officer or the COTR shall be at the Contractor's risk.

(End of clause)

G.4 SUBMISSION OF INVOICES (ARC 52.232-90) (JUN 2008) (MODIFIED JAN 2012)

(a) Invoices shall be prepared and submitted to the designated billing and payment office noted below in accordance with FAR 52.232.25 Prompt Payment clause:

NASA Shared Services Center (NSSC)
Financial Management Division (FMD)—Accounts Payable
Bldg. 1111, Road C
Stennis Space Center, MS 39529

Invoices shall include the Contractor's Taxpayer Identification Number (TIN). Electronic submission is preferred, via email NSSC-AccountsPayable@nasa.gov or fax 866-209-5415. A copy of the invoice shall be provided to the Contracting Officer.

(b) In the event that amounts are withheld from payment in accordance with the New Technology clause or other provisions of this contract, a separate invoice for the amount withheld shall be required before payment of that amount is made.

(c) This Contract does does not provide for partial payments. If applicable, payments will be made in accordance with the following schedule:

Payment will be made for separately priced items which have been received and accepted by NASA, and upon receipt of a payable invoice submitted in accordance with this clause.

(End of clause)
[END OF SECTION G]

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 CLAUSES INCORPORATED BY REFERENCE -- SECTION H

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

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1)

None Included By Reference

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18)

- 1852.223-72 SAFETY AND HEALTH (SHORT FORM) (APR 2002)
- 1852.223-75 MAJOR BREACH OF SAFETY OR SECURITY (FEB 2002) ALTERNATE I (FEB 2006) (*ALT I applicable only for educational or nonprofit institutions*)
- 1852.225-70 EXPORT LICENSES (FEB 2000) (Insert "NASA Ames Research Center" in paragraph b)
- 1852.244-70 GEOGRAPHIC PARTICIPATION IN THE AEROSPACE PROGRAM (APR 1985)

(End of clause)

H.2 KEY PERSONNEL AND FACILITIES (1852.235-71) (MAR 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 or as specified in the contract Schedule) 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.

Key Personnel and/or Facilities (Name/Title/ Position)	
TBD	

(End of clause)

H.3 FINAL SCIENTIFIC AND TECHNICAL REPORTS (1852.235-73) (DEC 2006) (ALT II) (DEC 2005)

(a) The Contractor shall submit to the Contracting Officer a final report that summarizes the results of the entire contract, including recommendations and conclusions based on the experience and results obtained. The final report should include tables, graphs, diagrams, curves, sketches, photographs, and drawings in sufficient detail to explain comprehensively the results achieved under the contract.

(b) The final report shall be of a quality suitable for publication and shall follow the formatting and stylistic guidelines contained in NPR 2200.2A, Guidelines for Documentation, Approval, and Dissemination of NASA Scientific and Technical Information. Electronic formats for submission of reports should be used to the maximum extent practical. Before electronically submitting reports containing scientific and technical information (STI) that is export-controlled or limited or restricted, contact the Contracting Officer to determine the requirements to electronically transmit these forms of STI. If appropriate electronic safeguards are not available at the time of submission, a paper copy or a CD-ROM of the report shall be required. Information regarding appropriate electronic formats for final reports is available at <http://www.sti.nasa.gov> under "Publish STI – Electronic File Formats."

(c) The last page of the final report shall be a completed Standard Form (SF) 298, Report Documentation Page.

(d) In addition to the final report submitted to the Contracting Officer, the Contractor shall concurrently provide to the Center STI/Publication Manager and the NASA Center for AeroSpace Information (CASI) a copy of the letter transmitting the final report to the Contracting Officer. The copy of the letter shall be submitted to CASI at the address listed at <http://www.sti.nasa.gov> under the "Get Help" link.

(e) Data resulting from this research activity may be subject to export control, national security restrictions or other restrictions designated by NASA; or, to the extent the Contractor receives or is given access to data necessary for the performance of the contract which contain restrictive markings, may include proprietary information of others. Therefore, the Contractor shall not publish, release, or otherwise disseminate, except to NASA, data produced during the performance of this contract, including data contained in the final report and any additional reports required by 1852.235-74 when included in the contract, without prior review by NASA. Should the Contractor seek to publish, release, or otherwise disseminate data produced during the performance of this contract, the Contractor may do so once NASA has completed its document availability authorization review and the availability of the data has been determined.

(End of clause)

H.4 ADDITIONAL REPORTS OF WORK- RESEARCH AND DEVELOPMENT (NFS 1852.235-74) (FEB 2003) (Modified MAY 2013)

In addition to the final report required under this contract, the Contractor shall submit the following report(s) to the Contracting Officer:

(a) Six month progress reports. The Contractor shall submit separate progress reports of all work accomplished during each six-month period of contract performance. In addition to factual data, these reports should include a separate analysis section interpreting the results obtained, recommending further action, and relating occurrences to the ultimate objectives of the contract. Sufficient diagrams, sketches, curves, photographs, and drawings should be included to convey the intended meaning.

(b) Submission dates. Progress reports shall be submitted by the 15th day of the month following the six-month period being reported. The final report shall be submitted by the final day of the effort under the contract.

(End of clause)

H.5 ORGANIZATIONAL CONFLICTS OF INTEREST, AND LIMITATION ON FUTURE CONTRACTING

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

(b) The nature of this potential Organizational Conflict of Interest is:

The Aeronautics Directorate hereafter referred to as “Code A” is one of the Directorates at NASA Ames Research Center that develops and manages programs, projects, and technologies that support NASA's science, exploration and aeronautics goals, with a focus on innovation. Currently, ARC supports the Airspace Systems Program of Aeronautics Research Mission Directorate.

This Contract, as delineated in and governed by its Statement of Work, will provide system design architecture concepts for a Shadow Mode Assessment Using Realistic Technologies for the National Airspace System that encompasses a technical approach, cost estimation and a benefits analysis for the NextGen Concepts and Technologies Development Project at Ames.

In order to perform this contract and, thus, support Code A requirements, the Contractor may be required to participate within the scope of the Statement of Work, either fully or in part, in requirements identification and specification, statement of work development, benchmarking, and other activities associated with Government procurements (i.e., Request for Proposals, Cooperative Agreement Notices, NASA Research Announcements). Further, contract performance also may require access to Government Sensitive Data or third party proprietary data, including inventions. Access to such Data or production of such Data by the Contractor creates a potential Organizational Conflict of Interest. Finally, the performance of certain potential activities under this contract – including, but not limited to, review of engineering design, analysis and testing – could result in the impairment of the Contractor's objectivity if such activities affect entities with which the Contractor has a direct or indirect affiliation or competitive posture.

(c) To avoid, neutralize, or mitigate the potential Organizational Conflict of Interest, the following restrictions upon future contracting shall apply:

(1) If the Contractor, under the terms of this Contract, is required to develop specifications or statements of work that are to be incorporated into a solicitation, the Contractor shall be ineligible to perform the work described in that solicitation as a prime or first-tier subcontractor under an ensuing NASA contract. This restriction shall remain in effect for a reasonable time, as agreed to by the Contracting Officer and the Contractor, sufficient to avoid unfair competitive advantage or potential bias (this time shall in no case be less than the duration of the initial production contract).

(2) The Contractor shall not, during the performance of the Contract and for a period of three years following completion of performance thereof, participate in competitions, as either a prime proposer or a proposed subcontractor, based upon Government Sensitive Data or other non-public data of another Contractor, obtained by the Contractor because of the Contractor's access to, and support of its performance under this contract.

(d) If, in the performance of work under this Contract, the Contractor has access to Government Sensitive Data or third-party proprietary data, the Contractor shall protect such data from unauthorized use or disclosure so long as it remains proprietary. In addition, the Contractor shall not be permitted to use such data other than in its performance of work under this Contract, unless:

(1) It receives the explicit written permission of the owner of such data and the Contracting Officer; or

(2) Such data has been released or otherwise made available to the public by the Government or the owner of the third-party proprietary data. In addition, the Contractor agrees that to the extent it receives or is given access to proprietary data, data protected by the Privacy Act of 1974 (5 U.S.C. 552a), or other confidential or privileged

technical, business, or financial information under this Contract, it shall treat such information in accordance with any use or dissemination restrictions imposed on such information. Further, the Contractor shall not submit an unsolicited proposal to the Government which is based on such data until one year after such data is released or otherwise made available to the public; further, any unsolicited proposal submitted pursuant to this provision shall identify any relationship to work produced under this Contract and any proposed use of such data.

(e)(1) When the Contractor enters into a separate agreement with a company for the protection of Government Sensitive Data or third-party proprietary data, the Contractor shall furnish a copy of that agreement to the Contracting Officer.

(2) The Contractor must educate its employees, through formal training, not to divulge Government Sensitive Data or third-party proprietary data, trade secrets, confidential information, or restricted data of companies received in connection with the performance of work under this Contract. The Contractor shall provide a plan to implement this training for the approval of the Contracting Officer.

(3) The Contractor shall obtain from all employees having access to Government Sensitive Data or third-party proprietary data under this Contract a written agreement which shall prohibit those employees, during the term of their employment and thereafter, from disclosing to others or using for their own behalf, such data received in connection with the performance of work under this Contract, and from retaining a copy of such data after termination of their employment under this Contract.

(f) The term "Contractor" as used in this clause shall include (i) the corporate or other entity executing this Contract with the Government; (ii) such entity's parent, subsidiary, affiliate, or successor entities to the extent that the parent, subsidiary, affiliate, or successor entity has responsibility for the performance of work under this Contract; and (iii) the Contractor's subcontractors that (A) support the Directorate, as delineated in the Statement of Work of this Contract, or (B) handle, receive, reduce, interpret, or transmit data obtained, used, or produced in conjunction with the support of the Directorate pursuant to this Contract.

(g) The term "Contract" as used in this clause shall include options, extensions, and any successor contracts performed or to be performed by the Contractor without any other contractor intervening.

(h) The term "Data" as used in this clause, means recorded information, regardless of form or media on which it may be recorded. The term includes technical data and computer software. The term further includes Government Sensitive Data or third-party proprietary data including proprietary data, trade secret information, data protected by the Privacy Act of 1974 (5 U.S.C. 552a) and other confidential or privileged technical, business or financial data.

(i) The term "Government Sensitive Data" as used in this clause means data for which the disclosure or use is controlled by U.S. Statute or implementing published federal regulations or NASA policy and, where so identified, includes data first produced by the Contractor.

(j) The Contractor's Organizational Conflicts of Interest Avoidance Plan is incorporated by full text into this Contract (see Attachment J.3). This Plan addresses Organizational Conflicts of Interest at the contract level. Each individual task order will state if additional Organizational Conflicts of Interest requirements exist and, if so, an additional Organizational Conflicts of Interest Avoidance Plan may be required by the Contracting Officer to address potential conflicts of interest prior to authorization of that task order.

(k) The Contractor shall include paragraphs (a) through (k) of this clause in every subcontract. The Contractor shall be responsible for ensuring compliance with all of the provisions of this clause by each of its subcontractors.

(End of clause)

H.6 MANAGEMENT AND PROTECTION OF DATA (ARC 52.227-93) (JUL 1988)

(a) In the performance of this contract it is anticipated that the Contractor may have access to, be furnished, use, or generate the following types of data (recorded information):

- (1) data submitted to the Government with limited rights or restricted rights notices;
- (2) data of third parties which the Government has agreed to handle under protective arrangements; and
- (3) data generated by or on behalf of the Government which the Government intends to control the use and dissemination thereof.

(b) In order to provide management appropriate for protecting the interests of the Government and other owners of such data, the Contractor agrees with respect to data in category (a)(1) above, and with respect to any data in categories (a)(2) and (a)(3) when so identified by the Contracting Officer, to:

- (1) use and disclose such data only to the extent necessary to perform the work required under this contract, with particular emphasis on restricting disclosure of the data to those persons who have a definite need for the data in order to perform under this contract;
- (2) not reproduce the data unless reproduction of the data is specifically permitted elsewhere in the contract or by the Contracting Officer;
- (3) refrain from disclosing the data to third parties without the written consent of the Contracting Officer; and
- (4) return or deliver the data including all copies thereof to the Contracting Officer or his designated recipient when requested by the Contracting Officer.

(End of clause)

H.7 HANDLING OF DATA (ARC 52.227-96) (JUN 1989)

(a) Paragraph (d)(1) of the "Rights in Data--General" clause of this contract permits the Government to restrict the Contractor's right to use, release to others, reproduce, distribute, or publish any data first produced or specifically used by the Contractor in the performance of the contract provided such restriction is expressly set forth in the contract. Pursuant to this authority, the following restrictions shall apply to such data and shall be included, in substance, in all subcontracts:

(b) Data specifically used.

(1) In the performance of this contract, it is anticipated the Contractor may have access, or be furnished, data (including financial, administrative, cost or pricing, or management information as well as technical data or computer software) of third parties which the Government has agreed to handle under protective arrangements, as well as such Government data for which the Government intends to control the use and dissemination.

(2) In order to protect the interests of the Government and the owners of such data, the Contractor agrees, with respect to such third party or Government data that is either marked with a restrictive legend or specifically identified in this contract or in writing by the Contracting Officer as being subject to this clause, to use and disclose such data only to the extent necessary to perform the work required under this contract, preclude disclosure of such data outside the Contractor's organization, and return or dispose of such data as directed by the Contracting Officer when the data is no longer needed for contract performance.

(3) Notwithstanding (2) above, the Contractor shall not be restricted in the use and disclosure of any data that becomes generally available without breach of this clause by this Contractor, is known to or is developed by the Contractor independently of any disclosure of proprietary, restricted, or confidential data hereunder, or is rightfully received by the Contractor from a third party without restriction.

(c) Data first produced.

Data first produced by the Contractor under this contract may include data for which the Government wants to control the use and dissemination. The Contracting Officer may require, or this contract may presently specify, that the Contractor apply restrictive legends to such identified data prior to delivery to the Government, or to third parties at the Government's direction, that restrict the use and disclosure of the data by any third party recipient. However, such restrictive legends shall in no way affect the Contractor's or the Government's rights to such data as provided in the "Rights in Data--General" clause of this contract.

(End of clause)

H.8 SUBCONTRACTING AND DATA RIGHTS (ARC 52.227-97) (NOV 2010) (MODIFIED APR 2013)

- (a) The Contractor shall flow down the data rights provisions of this contract to lower tier subcontractors to ensure that it can fulfill its data rights obligations to the Government. See Clause FAR 52.227-14(h), *Rights in Data—General*. The Contractor shall be held responsible to obtain rights for the Government where it fails to fulfill such obligations.
- (b) Pursuant to Clauses FAR 52.227-14(c)(2) and 52.227-17(c)(2), the Contractor must obtain Contracting Officer approval before incorporating any data not first produced under the Contract into data delivered under the contract. Before delivering such data, the Contractor must identify it and grant the Government, or acquire on its behalf, the broad licenses required by subparagraph (c) of the above clauses.
- (c) As part of Contractor's proposal, Contractor shall identify any proposed delivery of Limited Rights Data or Restricted Computer Software via the representation of any proposed delivery required under FAR 52.227-15. The Government will then determine any need for additional rights for Government use of such Limited Rights Data/Restricted Computer Software. Such rights will be captured in the notices set forth in Alts. II and III of the *Rights in Data—General* clause, FAR 52.227-14.
- (d) All NASA simulation and modeling software or software description (e.g., ACES) provided by the Government is subject to the use, handling and non-disclosure obligations of Clauses H.6 and H.7.

(End of clause)

H.9 DEVELOPMENT AND USE OF OPEN SOURCE SOFTWARE

- (a) The Government intends to release software (including documentation) developed under this contract in specified tasks as "Open Source" software, as that term is defined by the Open Source Definition promulgated by the Open Source Initiative ("OSI") (see <http://opensource.org/docs/osd>). External Release of NASA Software. This Open Source release shall be done in compliance with NASA Policy Requirement (NPR) 2210.1A - External Release of NASA Software. Accordingly, the contractor shall be required to assign copyright in the developed software (including documentation) to the Government. Where possible, the developed Open Source software shall be governed by the terms of the NASA Open Source Agreement (NOSA), which can be found at <http://opensource.arc.nasa.gov/page/nosa-software-agreement> or <http://opensource.org/licenses/nasa1.3.php>
- (b) It is anticipated that the software developed under this contract may include enhancements (bug fixes, feature additions) to existing Open Source software, such software being covered by an external Open Source software license. Some Open Source software licenses require further development/ enhancement of the covered Open Source software be further transferred only under that particular Open Source software license (e.g., GNU General Public Licenses (GPL)), making the external software license not compatible with the NOSA. The decision to incorporate into software developed under this contract any Open Source software that is governed by an Open Source software license that is not compatible with NOSA shall be made deliberately in consultation with the Government task manager and Patent Counsel prior to any development of software under this contract.

(End of clause)

[END OF SECTION H]

PART II - CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I.1 CLAUSES INCORPORATED BY REFERENCE -- SECTION I

Clause(s) in I.1 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 may be accessed electronically at this/these address(es):

Federal Acquisition Regulation (FAR) clauses:

<https://acquisition.gov/far/index.html>

NASA FAR Supplement (NFS) clauses:

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

I. ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

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 (OCT 2010)

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 (OCT 2010)

52.204-4 PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (MAY 2011)

52.204-10 REPORTING EXECUTIVE COMPENSATION AND FIRST-TIER SUBCONTRACT AWARDS (JUL 2010)

52.209-6 PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (DEC 2010)

52.209-9 UPDATES OF PUBLICLY AVAILABLE INFORMATION REGARDING RESPONSIBILITY (FEB 2012)

52.215-2 AUDIT AND RECORDS - NEGOTIATION (OCT 2010)

52.215-8 ORDER OF PRECEDENCE - UNIFORM CONTRACT FORMAT (OCT 1997)

52.215-14 INTEGRITY OF UNIT PRICES (OCT 2010) ALT I (OCT 1997)

52.219-8 UTILIZATION OF SMALL BUSINESS CONCERNS (JAN 2011)

52.219-9 SMALL BUSINESS SUBCONTRACTING PLAN (JAN 2011) (ALT II) (OCT 2001) (only applies to other than small business concerns)

52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REPRESENTATION (APR 2012)

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 VETERANS (SEP 2010)

52.222-36 AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (OCT 2010)

52.222-37 EMPLOYMENT REPORTS ON VETERANS (SEP 2010)

52.222-40 NOTIFICATION OF EMPLOYEE RIGHTS UNDER THE NATIONAL LABOR RELATIONS ACT (DEC 2010)

52.222-50 COMBATING TRAFFICKING IN PERSONS (FEB 2009)

52.222-54 EMPLOYMENT ELIGIBILITY VERIFICATION (JAN 2009)

52.223-6 DRUG-FREE WORKPLACE (MAY 2001)

52.223-18 ENCOURAGING CONTRACTOR POLICIES TO BAN TEXT MESSAGING WHILE DRIVING (Aug 2011)

52.225-1 BUY AMERICAN ACT- SUPPLIES (FEB 2009)

52.225-13 RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUN 2008)

52.227-1 AUTHORIZATION AND CONSENT (DEC 2007) ALT I (APR 1984)

52.227-2 NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (DEC 2007)

52.227-11 PATENT RIGHTS – OWNERSHIP BY THE CONTRACTOR (DEC 2007) (as modified by NFS 1852.227-11 PATENT RIGHTS – RETENTION BY THE CONTRACTOR (SHORT FORM) *(does not apply to other than small businesses or nonprofits)*)

52.227-14 RIGHTS IN DATA- GENERAL ALTERNATE II (DEC 2007), ALT III (DEC 2007) (AS MODIFIED BY NFS 1852.227-14, RIGHTS IN DATA- GENERAL)

52.227-16 ADDITIONAL DATA REQUIREMENTS (JUN 1987)

52.227-17 RIGHTS IN DATA – SPECIAL WORKS (DEC 2007)

52.229-3 FEDERAL, STATE, AND LOCAL TAXES (APR 2003)

52.232-2 PAYMENTS UNDER FIXED-PRICE RESEARCH AND DEVELOPMENT CONTRACTS (APR 1984)

52.232-8 DISCOUNTS FOR PROMPT PAYMENT (FEB 2002)

52.232-11 EXTRAS (APR 1984)

52.232-17 INTEREST (OCT 2010)

52.232-23 ASSIGNMENT OF CLAIMS (JAN 1986)

52.232-25 PROMPT PAYMENT (OCT 2008)

52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER - CENTRAL CONTRACTOR REGISTRATION (OCT 2003)

52.233-1 DISPUTES (JUL 2002) ALT I (DEC 1991)

52.233-3 PROTEST AFTER AWARD (AUG 1996)

52.233-4 APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)

52.242-13 BANKRUPTCY (JUL 1995)

52.243-1 CHANGES - FIXED-PRICE (AUG 1987) ALT V (APR 1984)

52.244-6 SUBCONTRACTS FOR COMMERCIAL ITEMS (DEC 2010)

52.246-23 LIMITATION OF LIABILITY (FEB 1997)

52.249-2 TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (MAY 2004)

52.249-9 DEFAULT (FIXED-PRICE RESEARCH AND DEVELOPMENT) (APR 1984)

52.253-1 COMPUTER GENERATED FORMS (JAN 1991)

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) CLAUSES

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)

1852.227-11 PATENT RIGHTS – RETENTION BY THE CONTRACTOR (SHORT FORM) (*applies to small businesses and nonprofits*)

1852.235-70 CENTER FOR AEROSPACE INFORMATION (DEC 2006)

1852.237-72 ACCESS TO SENSITIVE INFORMATION (JUN 2005)

1852.237-73 RELEASE OF SENSITIVE INFORMATION (JUN 2005)

(End of clause)

I.2 RIGHTS TO PROPOSAL DATA (TECHNICAL) (52.227-23) (JUN 1987)

Except for data contained on pages _____, it is agreed that as a condition of award of this contract, and notwithstanding the conditions of any notice appearing thereon, the Government shall have unlimited rights (as defined in the "Rights in Data - General" clause contained in this contract) in and to the technical data contained in the proposal dated _____ upon which this contract is based.

(End of clause)

I.3 PROVIDING ACCELERATED PAYMENT TO SMALL BUSINESS SUBCONTRACTORS (52.232-99) (DEVIATION 2012-00014) (August 2012)

This clause implements the temporary policy provided by OMB Policy Memorandum M-12-16, Providing Prompt Payment to Small Business Subcontractors, dated July 11, 2012.

- (a) Upon receipt of accelerated payments from the Government, the contractor is required to make accelerated payments to small business subcontractors to the maximum extent practicable after receipt of a proper invoice and all proper documentation from the small business subcontractor.
 - (b) Include the substance of this clause, including this paragraph (b), in all subcontracts with small business concerns.
 - (c) The acceleration of payments under this clause does not provide any new rights under the Prompt Payment Act.
- (End of clause)

I.4 OMBUDSMAN (1852.215-84) (NOV 2011)

- (a) An ombudsman has been appointed to hear and facilitate the resolution of concerns from offerors, potential offerors, and contractors during the pre-award and post-award 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, whose name, address, telephone number, facsimile number, and e-mail address may be found at: http://prod.nais.nasa.gov/pub/pub_library/Omb.html. Concerns, issues, disagreements, and recommendations which cannot be resolved at the installation may be referred to the Agency ombudsman identified at the above URL. 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.5 RESTRICTION ON FUNDING ACTIVITY WITH CHINA (1852.225-71) (FEB 2012)

- (a) Definition - "China" or "Chinese-owned company" means the People's Republic of China, any company owned by the People's Republic of China or any company incorporated under the laws of the People's Republic of China.

- (b) Public Laws 112-10, Section 1340(a) and 112-55, Section 539, restrict NASA from contracting to participate, collaborate, coordinate bilaterally in any way with China or a Chinese-owned company using funds appropriated on or after April 25, 2011. Contracts for commercial and non-developmental items are exempted from the prohibition because they constitute purchase of goods or services that would not involve participation, collaboration, or coordination between the parties.
- (c) This contract may use restricted funding that was appropriated on or after April 25, 2011. The contractor shall not contract with China or Chinese-owned companies for any effort related to this contract except for acquisition of commercial and non-developmental items. If the contractor anticipates making an award to China or Chinese-owned companies, the contractor must contact the contracting officer to determine if funding on this contract can be used for that purpose.
- (d) Subcontracts - The contractor shall include the substance of this clause in all subcontracts made hereunder.
(End of clause)

[END OF SECTION I]

SECTION J - LIST OF ATTACHMENTS

LIST OF ATTACHMENTS

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

Attachment No.	Title	Date	No. of Pages
1	Proposal/ Statement of Work entitled “Shadow Mode Assessments using Realistic Technologies for the National Airspace System (SMART NAS)”		
2	Contract Data Requirements List (CDRL)		
3	Organizational Conflicts of Interest Avoidance Plan, to be submitted with proposal and incorporated into resulting contract, see Clauses H.5 and L.6(e)		
4	Delivery and Fixed Price Payment Schedule (template attached to solicitation, to be submitted with offeror’s proposal and incorporated into resulting contract), see Section L.6(d), to be incorporated into Section F.4		
5	Small Business Subcontracting Plan (to be submitted with offeror’s proposal and incorporated into resulting contract), reference Section L.6 (b) (3).		
6	Small Business Subcontracting Plan Goals (template attached to solicitation, to be submitted with offeror’s proposal and incorporated into resulting contract), see Section L.6 (b) (3).		

(End of clause)

[END OF SECTION J]

PART IV - REPRESENTATIONS AND INSTRUCTIONS

SECTION K - REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS

K.1 52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (DEC 2012)

Note: The CCR and ORCA federal contractor databases have been consolidated into the System for Award Management (SAM) federal system, accessible at <http://www.sam.gov>

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 541712.

(2) The small business size standard is 500 employees.

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

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

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

(i) Paragraph (d) applies.

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

(c)(1) The following representations or certifications in ORCA are applicable to this solicitation as indicated:

(i) [52.203-2](#), Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless—

(A) The acquisition is to be made under the simplified acquisition procedures in [Part 13](#);

(B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or

(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) [52.203-11](#), Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$150,000.

(iii) [52.204-3](#), Taxpayer Identification. This provision applies to solicitations that do not include the clause at [52.204-7](#), Central Contractor Registration.

(iv) [52.204-5](#), Women-Owned Business (Other Than Small Business). This provision applies to solicitations that—

(A) Are not set aside for small business concerns;

(B) Exceed the simplified acquisition threshold; and

(C) Are for contracts that will be performed in the United States or its outlying areas.

(v) [52.209-2](#), Prohibition on Contracting with Inverted Domestic Corporations—Representation. This provision applies to solicitations using funds appropriated in fiscal years 2008, 2009, 2010, or 2012.

(vi) [52.209-5](#), Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.

(vii) [52.214-14](#), Place of Performance—Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.

(viii) [52.215-6](#), Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.

(ix) [52.219-1](#), Small Business Program Representations (Basic & Alternate I). This provision applies to solicitations when the contract will be performed in the United States or its outlying areas.

(A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.

(B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.

(x) [52.219-2](#), Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract will be performed in the United States or its outlying areas.

(xi) [52.222-22](#), Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at [52.222-26](#), Equal Opportunity.

(xii) [52.222-25](#), Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at [52.222-26](#), Equal Opportunity.

(xiii) [52.222-38](#), Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial items.

(xiv) [52.223-1](#), Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA–designated items; or include the clause at [52.223-2](#), Affirmative Procurement of Biobased Products Under Service and Construction Contracts.

(xv) [52.223-4](#), Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA–designated items.

(xvi) [52.225-2](#), Buy American Act Certificate. This provision applies to solicitations containing the clause at [52.225-1](#).

(xvii) [52.225-4](#), Buy American Act—Free Trade Agreements—Israeli Trade Act Certificate. (Basic, Alternates I, II, and III.) This provision applies to solicitations containing the clause at [52.225-3](#).

(A) If the acquisition value is less than \$25,000, the basic provision applies.

(B) If the acquisition value is \$25,000 or more but is less than \$50,000, the provision with its Alternate I applies.

(C) If the acquisition value is \$50,000 or more but is less than \$77,494, the provision with its Alternate II applies.

(D) If the acquisition value is \$77,494 or more but is less than \$100,000, the provision with its Alternate III applies.

(xviii) [52.225-6](#), Trade Agreements Certificate. This provision applies to solicitations containing the clause at [52.225-5](#).

(xix) [52.225-20](#), Prohibition on Conducting Restricted Business Operations in Sudan—Certification. This provision applies to all solicitations.

(xx) [52.225-25](#), Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran-Representation and Certifications. This provision applies to all solicitations.

(xxi) [52.226-2](#), Historically Black College or University and Minority Institution Representation. This provision applies to—

(A) Solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions; and

(B) For DoD, NASA, and Coast Guard acquisitions, solicitations that contain the clause at [52.219-23](#), Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns.

(2) The following certifications are applicable as indicated by the Contracting Officer:

[Contracting Officer check as appropriate.]

(i) [52.219-22](#), Small Disadvantaged Business Status.

(A) Basic.

(B) Alternate I.

(ii) [52.222-18](#), Certification Regarding Knowledge of Child Labor for Listed End Products.

(iii) [52.222-48](#), Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment Certification.

(iv) [52.222-52](#), Exemption from Application of the Service Contract Act to Contracts for Certain Services—Certification.

(v) [52.223-9](#), with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA—Designated Products (Alternate I only).

(vi) [52.227-6](#), Royalty Information.

(A) Basic.

(B) Alternate I.

(vii) [52.227-15](#), Representation of Limited Rights Data and Restricted Computer Software (see K.3 below).

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

FAR CLAUSE #	TITLE	DATE	CHANGE

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

(End of provision)

K.2 52.209-7 INFORMATION REGARDING RESPONSIBILITY MATTERS (FEB2012)

(a) *Definitions*. As used in this provision—

“Administrative proceeding” means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (*e.g.*, Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceeding at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

“Federal contracts and grants with total value greater than \$10,000,000” means—

- (1) The total value of all current, active contracts and grants, including all priced options; and
- (2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and delivery and multiple-award Schedules).

“Principal” means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (*e.g.*, general manager; plant manager; head of a division or business segment; and similar positions).

(b) The offeror has does not have current active Federal contracts and grants with total value greater than \$10,000,000.

(c) If the offeror checked “has” in paragraph (b) of this provision, the offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIS) is current, accurate, and complete as of the date of submission of this offer with regard to the following information:

(1) Whether the offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:

(i) In a criminal proceeding, a conviction.

(ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more.

(iii) In an administrative proceeding, a finding of fault and liability that results in—

(A) The payment of a monetary fine or penalty of \$5,000 or more; or

(B) The payment of a reimbursement, restitution, or damages in excess of \$100,000.

(iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if the proceeding could have led to any of the outcomes specified in paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.

(2) If the offeror has been involved in the last five years in any of the occurrences listed in (c) (1) of this provision, whether the offeror has provided the requested information with regard to each occurrence.

(d) The offeror shall post the information in paragraphs (c) (1) (i) through (c) (1) (IV) of this provision in FAPIS as required through maintaining an active registration in the Central Contractor Registration database via <https://www.acquisition.gov> (see 52.204-7).

(End of provision)

K.3 52.227-15 REPRESENTATION OF LIMITED RIGHTS DATA AND RESTRICTED COMPUTER SOFTWARE (DEC 2007)

(a) This solicitation sets forth the Government’s known delivery requirements for data (as defined in the clause at [52.227-14](#), Rights in Data—General). Any resulting contract may also provide the Government the option to order additional data under the Additional Data Requirements clause at [52.227-16](#), if included in the contract. Other than design architecture drawings/charts/diagrams which are subject to the Rights in Data—Special Works clause at [52.227-17](#), any data delivered under the resulting contract will be subject to the Rights in Data—General clause at [52.227-14](#) included in this contract. Under the latter clause, a Contractor may withhold from delivery data that qualify as limited rights data or restricted computer software, and deliver form, fit, and function data instead. The latter clause also may be used with its Alternates II and/or III to obtain delivery of limited rights data or restricted computer software, marked with limited rights or restricted rights notices, as appropriate. In addition, use of Alternate V with this latter clause provides the Government the right to inspect such data at the Contractor’s facility.

(b) By completing the remainder of this paragraph, the offeror represents that it has reviewed the requirements for the delivery of technical data or computer software and states [*offeror check appropriate block*]—

(1) None of the data proposed for fulfilling the data delivery requirements qualifies as limited rights data or restricted computer software; or

(2) Data proposed for fulfilling the data delivery requirements qualify as limited rights data or restricted computer software and are identified as follows: _____ (*offeror fill-in*)

(c) Any identification of limited rights data or restricted computer software in the offeror’s response is not determinative of the status of the data should a contract be awarded to the offeror.

(End of provision)

K.4 1852.225-72 RESTRICTION ON FUNDING ACTIVITY WITH CHINA – REPRESENTATION

(a) Definition - “China” or “Chinese-owned” means the People’s Republic of China, any company owned by the People’s Republic of China or any company incorporated under the laws of the People’s Republic of China.

(b) Public Laws 112-10, Section 1340(a) and 112-55, Section 536, restrict NASA from contracting to participate, collaborate, or coordinate bilaterally in any way with China or a Chinese-owned company with funds appropriated on or after April 25, 2011. Contracts for commercial and non-developmental items are excepted from the prohibition as they constitute purchase of goods or services that would not involve participation, collaboration, or coordination between the parties.

(c) Representation. By submission of its offer, the offeror represents that the offeror is not China or a Chinese-owned company.

(End of provision)

[END OF SECTION K]

SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

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

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

Federal Acquisition Regulation: <https://acquisition.gov/far/index.html>

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

(End of provision)

L.2 LISTING OF PROVISIONS INCORPORATED BY REFERENCE

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

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

CLAUSE NUMBER	DATE	TITLE
52.204-7	DEC 2012	CENTRAL CONTRACTOR REGISTRATION
52.215-1	JAN 2004	INSTRUCTIONS TO OFFERORS - COMPETITIVE ACQUISITION

II. NASA FAR SUPPLEMENT (48 CFR CHAPTER 18) PROVISIONS

CLAUSE NUMBER	DATE	TITLE
1852.227-71	APR 1984	REQUESTS FOR WAIVER OF RIGHTS TO INVENTIONS <i>(applies to other than small business firm or nonprofits)</i>
1852.227-84	DEC 1989	PATENT RIGHTS CLAUSES
1852.233-70	OCT 2002	PROTEST TO NASA

(End of provision)

L.3 52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of 2-4 Firm Fixed Price contracts resulting from this solicitation.

(End of provision)

L.4 52.233-2 SERVICE OF PROTEST (SEPT 2006)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgement of receipt from:

Bethany McClave
 NASA Ames Research Center
 Mail Stop 241-1
 Moffett Field, CA 94035-0001

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

(End of provision)

L.5 PROPOSAL PREPARATION--GENERAL INSTRUCTIONS

(a) All proposal volumes must be received by the Contracting Officer NO LATER THAN the date and time listed in Block 9 of the SF33 (RFP cover page). All proposal volumes must be submitted to NASA at the address indicated in Block 8 of the SF33. Failure to follow these instructions may render contractor’s submittal as "non-responsive".

LATE SUBMISSION: Any volume submitted after the specified time will cause the entire proposal to be considered late in accordance with provision FAR 52.215-1, “Instructions to Offerors–Competitive.”

(b) Format and page limitations: The proposal package shall include one signed hard copy (8.5” x 11” paper) and two compact discs (CDs) with files saved in both portable document format (PDF) and Microsoft Office (Word or Excel). In the event of discrepancies between the electronic copies of the proposal and the hard copy of the submitted proposal, the hard copy of the proposal shall be the official submitted proposal. Pages shall be single spaced using no less than 12-point Times New Roman or Arial font with a one inch border minimum on all sides. All proposals shall be submitted in three separate volumes plus the cover pages as described below. Each proposal shall be organized in the following order, labeled by Volume Number and Title. No more than the maximum page limit in each volume will be evaluated.

Proposal Component	Location in RFP	Page Limitation
Cover Letter	L.6(a)	No Limit
Volume I – Mission Suitability	L.6(b)	
(A) Technical Approach	L.6(b)(1)	25 pages
(B) Key Personnel	H.2, L.6(b)(2)	No Limit
(C) Small Business Utilization	L.6(b)(3)	No Limit
Volume II – Past Performance	L.6(c)	5 pages
Volume III – Price Proposal	L.6(d)	Attachment J.4 Delivery and Fixed Price Payment Schedule
Volume IV – Organizational Conflicts of Interest	H.5, L.6(e)	No Limit

L.6 PROPOSAL PREPARATION--SPECIFIC INSTRUCTIONS

Each proposal shall contain a Cover Letter with the following information:

(a) **COVER LETTER** (No Page Limitation)

Include a cover letter that includes a signed acknowledgement of any solicitation amendments. Also include the following information:

- Full company name, address, DUNS # and CAGE code to be used to verify contractor's records in federal acquisition and administrative databases.
- Full company names and addresses of planned subcontractors and teaming partners.
- Include names, telephone numbers, and email addresses of person(s) to be contacted for clarification of proposal information.
- A statement that the proposal is firm for a period of not less than 120 days.
- A statement of acceptance of the anticipated contract clauses and proposed schedule, or specific exceptions taken to any of the terms and conditions.
- Include completed Section K provisions
- Include SF33 Solicitation, Offer, and Award (cover page of this solicitation) that must be signed by an official authorized to contractually bind your company. Blocks 12 through 18 of the SF 33 shall be completed.

(b) VOLUME I: MISSION SUITABILITY FACTOR

The Mission Suitability factor indicates, for each offeror, the merit or excellence of the work to be performed or product to be delivered. The proposal shall address the subfactors within Mission Suitability according to the specific instructions in sections (1) – (3) below.

(1) SUBFACTOR A: TECHNICAL APPROACH

The technical proposal shall not exceed 25 pages.

The offeror shall submit a document that specifically demonstrates its capability to develop and perform all the requirements of the Statement of Work. The offeror shall also address the feasibility, comprehensiveness, and quality of its technical approach and realistic approach for developing Shadow Mode Assessments using Realistic Technologies for the NAS (SMART NAS) capability to accelerate the transformation of the NAS. The offeror shall provide its approach to meeting the requirements listed in the SOW tasks and deliverables. The following elements shall be included:

1. Understanding of the simulation and modeling capabilities, NAS, and SMART NAS

- a) The offeror shall demonstrate a clear understanding of current state of the art NAS wide gate-to-gate simulation tools and characteristics and capabilities as well as the offeror's assessment of the gaps in current state of the art NAS wide gate to gate simulation modeling capabilities.
- b) The offerors shall provide a description of how SMART NAS architecture and SMART NAS capability will address the gap and add to the modeling and simulation state-of-the-art. The offeror shall also include schedule and risks associated with the conduct of the work.
- c) The offerors shall provide a description of air traffic management and air transportation functionalities that must be represented, emulated and/or simulated as part of SMART NAS. The offeror shall provide a high-level description for interface and external data sources required for SMART NAS capability. This description shall include an approach to functional, structural, concurrency, data views and needs and discussion of alternative software and interface approaches.

2. Description of SMART NAS Architecture Development

- a) The offeror shall provide an innovative approach to meeting the requirements of developing SMART NAS architecture listed in the SOW tasks and deliverables. The offeror shall provide applicable innovative enterprise-level architectural methodologies/frameworks, techniques, technologies that would be used during SMART NAS development. The offeror shall justify why the chosen methodologies/frameworks, techniques, technologies are most suitable to SMART NAS. (Note: Enterprise architectural

styles/frameworks include Zachman Framework, High-Level Architecture, The Open Group Architecture Framework, Department of Defense Architecture Framework or applying some other innovative architectural design patterns and their applicability to SMART NAS). The offeror shall provide a description of the format in which the architecture will be described and delivered.

- b) The offeror shall provide a demonstrated capability to develop large-scale open architecture/frameworks that include an open source software simulation framework. The offeror will discuss its methods to incorporate open standards where applicable.
- c) The offeror shall provide insights from lessons learned in developing prior open source architecture for large-scale systems and how they will apply to SMART NAS architecture developments.

3. Description of SMART NAS Benefits and Cost Estimation Methods

- a) The offeror shall describe an approach to cost estimation of SMART NAS capability development and maintenance and benefit estimation for developing SMART NAS capability.

(2) SUBFACTOR B: KEY PERSONNEL

- a) The offeror shall provide position descriptions and/or resumes for key personnel. The offeror shall discuss the relevant experience and background of proposed key personnel and any other relevant personnel for the purpose of demonstrating a technical and managerial understanding of what will be required to fulfill the requirements of this award. Describe the time commitment for each proposed key personnel, and the time allocation of each key personnel to each task. Include professional certifications, education and degrees, previous experience, current capability and commitment. **(No page limitation)**.

(3) SUBFACTOR C: SMALL BUSINESS UTILIZATION SUBFACTOR – (No page limitation)

All offerors, except small businesses, must complete the portion of the instructions under Small Business Subcontracting specific to the Small Business Subcontracting Plan. Small businesses are not required to submit Small Business Subcontracting Plans; however, small businesses are required to indicate the amount of effort proposed to be done by a small business either at the prime level or at the first tier subcontract level.

All offerors are required to respond to the Commitment to the Small Business Program.

(a) Small Business Subcontracting

(1) Small Business Subcontracting Plan (the Plan) Required by the FAR:

(i) This solicitation contains FAR clause 52.219-9, “Small Business Subcontracting Plan with Alternate II”. The Plan described and required by the clause, including the associated subcontracting percentage goals and subcontracting dollars, shall be submitted with your proposal.

(ii) The Contracting Officer’s assessment of appropriate subcontracting goals for this acquisition, expressed as a percent of TOTAL CONTRACT VALUE is as follows:

Small Businesses (SB)	20.0%
Small Disadvantaged Business Concerns (SDB)	3.0%
Women Owned Small Business Concerns (WOSB)	7.0%
Historically Black Colleges and Universities (HBCU)/Minority Institutions(MI)	0.0%
HUBZone Small Business Concerns (HBZ)	1.0%
Veteran Owned Small Business Concerns (VOSB)	4.0%
Service-Disabled Veteran-Owned Small Business Concerns (SDVOSB)	3.0%

(iii) The numbers above reflect the Contracting Officer’s assessment of the appropriate subcontracting goals to be achieved at the completion of contract performance. If it is anticipated that the proposed small business goals will not be met by the submission of the first Individual Subcontracting Report (ISR) for this effort as required by 52.219-9 Small Business Subcontracting Plan, the Offeror should discuss their approach to include timeline for meeting these goals and the rationale for it.

(iv) Offerors are encouraged to propose goals that are equivalent to or greater than those recommended by the Contracting Officer. However, offerors must perform an independent assessment of the small business subcontracting opportunities.

(v) The Plan submitted with the proposal shall be incorporated in Section J as Attachment J.5 in the resulting contract. The requirements in the Plan must flow down to first tier large business subcontracts expected to exceed \$650,000 or \$1,500,000 for construction of a public facility. Although these first tier large business subcontractors are encouraged to meet or exceed the stated goals, it is recognized that the subcontracting opportunities available to these subcontractors may differ from those suggested in the solicitation based upon the nature of their respective performance requirements.

(vi) Offerors are advised that a proposal will not be rejected solely because the submitted Plan does not meet the NASA recommended goals that are expressed in paragraph (a) (2) above in terms of percent of TOTAL CONTRACT VALUE. NASA will consider the amount of work being retained for performance by the prime contractor in-house when determining whether a subcontracting plan is acceptable. Offerors shall discuss the rationale for any goal proposed that is less than the Contracting Officer’s recommended goal in any category. In addition, the offeror shall describe the efforts made to establish a goal for that category and what ongoing efforts, if any, the offeror plans during performance to increase participation in that category.

(vii) In addition to submitting a Small Business Subcontracting Plan in accordance with Section I, FAR clause 52.219-9, Alternate II, offerors shall complete RFP Attachment J.6, SMALL BUSINESS SUBCONTRACTING PLAN GOALS, which provides a breakdown of the offeror’s proposed goals, by small business category, expressed in terms of both a percent of TOTAL CONTRACT VALUE and a percent of TOTAL PLANNED SUBCONTRACTS. Offerors shall modify the exhibit to show the proposed subcontracting goals for the basic contract requirement and each option separately.

Example of Subcontracting Goals, expressed in both contract value and subcontract value, for a contract proposed at \$100M with estimated subcontracts of \$50M:

	<i>Column A</i>	<i>Column B</i>	<i>Column C</i>
Business Category	Goal as Percent of Contract Value	Dollar Value to be subcontracted per Category	Goal as Percent of Subcontracting Value
Small Business Concerns	25 percent	\$25,000,000	50 percent
Large Business Concerns	n/a	\$25,000,000	50 percent
Total Dollars to be Subcontracted	n/a	\$50,000,000	100 percent
<i>The following small business subcategories do not necessarily add up to the percentage and dollar amount in the “Small Business Concerns” category above, since some small businesses do not fall into any of the subcategories below, while others will fall into more than one subcategory below.</i>			
Subcategories of Small Business Concerns			
Women Owned Small Business Concerns	9 percent	\$9,000,000	18 percent
Small Disadvantaged Business Concerns	5.5 percent	\$5,500,000	11 percent
Veteran Owned Small Business Concerns	2.5 percent	\$2,500,000	5 percent

Service-Disabled Veteran-Owned Small Business Concerns	1.5 percent	\$1,500,000	3 percent
HUBZone Small Business Concerns	1.5 percent	\$1,500,000	3 percent
Historically Black Colleges and Universities/Minority Institutions	1.5 percent	\$1,500,000	3 percent

It is recommended that Offerors first complete Column B by entering the dollar amount the Offeror proposes to subcontract to each business category and subcategory.

To complete Column A, divide the dollar amount in Column B by the **total offered price of the proposal** (that is, total contract value). In the example above, Column A for Veteran Owned Business Concerns = \$2,500,000 divided by \$100,000,000, or 2.5 percent.

To complete column C, divide the corresponding amount in Column B by the amount in the “Total Dollars to be Subcontracted” cell in Column B. In the example above, Column C for Women-Owned Small Businesses = \$9,000,000 divided by \$50,000,000, or 18percent.

Note: the “Total Dollars to be Subcontracted” amount in Column C will always be that category divided by itself (100percent if any dollars are subcontracted).

(b) Commitment to the Small Business Program

(1) All offerors shall briefly describe work that will be performed by small businesses. Proposals should also identify any work to be subcontracted that is considered “high technology.” High Technology is defined as research and development efforts that are within or advance the state-of-the-art in technology discipline and are performed primarily by professional engineers, scientists, and highly skilled and trained technicians or specialists.

(2) Offerors must connect the work to the subcontractor and specify the extent of commitment to use the subcontractor (s) (enforceable vs. non-enforceable commitments). (Small Business offerors shall provide this information to the extent subcontracting opportunities exist in their approach to performing the requirement.)

(3) All offerors shall provide information demonstrating the extent of commitment to utilize small business concerns and to support their development. Information provided should include a brief description of established or planned procedures and organizational structure for Small Business outreach, assistance, participation in the Mentor Protégé program, counseling, market research and Small Business identification, and relevant purchasing procedures. For Other than Small (Large) Business offerors, this information should conform to applicable portions of the submitted Small Business Subcontracting Plan. Small Business Offerors shall provide this information to the extent subcontracting opportunities exist in their approach to performing the requirement.)

(End of provision)

(c) VOLUME II: PAST PERFORMANCE FACTOR

The past performance section of the proposal shall **not exceed five (5) pages** and shall include the offeror’s experience relevant to the overall effort.

Each offeror shall describe relevant government or industrial contracts that their company has completed within the past 3 years or is currently performing that are similar to this requirement in scope, content, and complexity. The information that should be provided includes the contract number(s), period of performance, contract value, size and scope of contract, technical achievements, and contractual and technical point of contact (POC) information.

The offeror shall describe the relevance of its past experience to this requirement and what the firm has gained from this past experience as well as how it would assist the offeror in the performance of this requirement in any of the

following areas:

- Offerors shall demonstrate experience in all aspects of advanced concepts and technologies related to air traffic management in research and development.
- Offerors shall provide evidence of working knowledge or ability to develop large-scale distributed simulations and modeling capability particularly related to air traffic management or complex enterprises.
- Offerors shall demonstrate experience in developing open-source architecture for a large-scale and enterprise level system.
- Offerors shall demonstrate expertise with both program management and project management.
- Offerors shall provide evidence of experience working with state of the art air traffic management software.
- Offerors shall demonstrate design practices that ensure modular, flexible and efficient implementation leading to flexible and efficient software systems.
- Offerors shall provide evidence of experience related to cost estimation of air traffic management related multi-year research and development projects.
- Offerors shall provide evidence of experience related to benefits assessment of advanced concepts and technologies related to benefits estimation.

The Contracting Officer may also access past performance information through the Contractor Performance Assessment Reporting System (CPARS) or similar systems of other Government departments and agencies, questionnaires tailored to the circumstances of this acquisition, Defense Contract Management Agency (DCMA) channels, interviews with Program Managers and Contracting Officers, and other sources known to the Government, including commercial sources. Offerors are notified that, in conducting an assessment of past performance, the Government reserves the right to use both data provided by the Offeror and data obtained from other sources. Offerors without a record of past performance or for whom past performance information is not available, will not be evaluated favorably or unfavorably.

(d) VOLUME III: PRICE FACTOR

- (a) The offeror shall propose a firm fixed price payment schedule by completing Attachment J.4 Delivery and Fixed Price Payment Schedule (to be incorporated into Section F.4).
- (b) Each contract delivery event shall be separately priced.

(e) VOLUME IV: ORGANIZATIONAL CONFLICTS OF INTEREST

- (a) The offeror shall provide an Organizational Conflicts of Interest Avoidance Plan with narrative which describes procedures to ensure compliance with safeguards are in place to maintain control, handling and non-disclosure of sensitive data in conformance with contract requirements. Specifically, the Plan shall address all the requirements identified in Section H.5 (*Organizational Conflicts of Interest and Limitation on Future Contracting*). **(No page limitations)**

[END OF SECTION L]

SECTION M- EVALUATION FACTORS FOR AWARD

M.1 SOURCE SELECTION AND EVALUATION FACTORS--GENERAL

1. Source Selection

The Government may award to other than the most highly rated or the lowest priced offeror.

The Government anticipates award of contracts based on the initial offers received, without discussion. Accordingly, each Offeror shall submit its proposal to the Government using the most favorable terms from a price and technical standpoint.

2. Evaluation Factors and Subfactors

The evaluation factors in descending order of importance are Mission Suitability, Past Performance, and Price. All evaluation factors other than price, when combined, are significantly more important than price.

(End of Text)

M.2 MISSION SUITABILITY EVALUATION FACTOR

The Government will evaluate the offeror's understanding and technical approach to meeting the requirements of the Statement of Work (SOW). The Government will evaluate the effectiveness of the offeror's proposed techniques and procedures, and the methodology proposed for meeting the requirements. The Mission Suitability evaluation will take into consideration whether the resources proposed are consistent with the proposed efforts or whether they are overstated or understated for the effort to be accomplished. The offeror's justification for the proposed resources will be considered in this evaluation. If the offeror's proposal demonstrates a lack of resource realism, it will be evaluated as demonstrating a lack of understanding of the requirements. Specifically, NASA will evaluate the offeror's proposal for the following:

(a) SUBFACTOR A: TECHNICAL APPROACH

NASA will evaluate the offeror's detailed proposal delineating how the goals and objectives of the SOW requirements (tasks and deliverables) will be accomplished, including proposed schedule and risks associated with the conduct of the work. NASA will evaluate the feasibility, comprehensiveness, and quality of the offeror's technical approach and its realism for developing SMART NAS architecture alternatives to address the needs of the SMART NAS capability. The offeror's description of the development of the initial architecture alternatives for SMART NAS will be evaluated to determine the offeror's understanding of NASA requirements, including any novel or innovative methods to complete the requirements. The proposer's approach to functional, structural, concurrency, and data views and needs and discussion of alternative software and interface approaches based on current and emerging tools and techniques will be evaluated. NASA will evaluate the offeror's capability to develop a large-scale open architecture that includes an open source software simulation framework.

1. Evaluation of Understanding of simulation and modeling capabilities, NAS, and SMART NAS

- b) NASA will evaluate the offeror's understanding of current state of the art NAS wide gate-to-gate simulation tools and characteristics and capabilities as well as the offeror's assessment of the gaps in current state of the art NAS wide gate to gate simulation modeling capabilities.
- c) NASA will evaluate the offeror's description of how SMART NAS architecture and SMART NAS capability will address the gap and add to the modeling and simulation state of the art.
- d) NASA will evaluate the offeror's description of air traffic management and air transportation functionalities that must be represented, emulated and/or simulated as part of SMART NAS. NASA will evaluate a high-level description of interfaces and external data sources required for SMART NAS

including but not limited to an approach to functional, structural, concurrency, data views and needs and discussion of alternative software and interface approaches.

2. Evaluation of description of SMART NAS Architecture Development

- a) NASA will evaluate the offeror's innovative approach to meeting the requirements listed in the SOW tasks and deliverables. NASA will evaluate the offeror's applicable innovative enterprise-level architectural methodologies/frameworks, techniques, technologies that would be used during SMART NAS development. NASA will evaluate the offeror's justification as to why the chosen methodologies/frameworks, techniques, technologies are most suitable to SMART NAS. NASA will evaluate the offeror's description of the format in which the architecture will be described and delivered.
- b) NASA will evaluate the offeror's demonstrated capability to develop large scale open architecture that includes an open source software simulation framework. NASA will also evaluate the offeror's methods to incorporate open standards where applicable.
- c) NASA will evaluate the offeror's insights from lessons learned in developing prior open source architecture for large-scale systems and how they will apply to SMART NAS architecture developments.

3. Description of SMART NAS Benefits and Cost Estimation Methods

- a) NASA will evaluate the offeror's approach to conducting cost estimation (SMART NAS development and maintenance costs) and benefit estimation of SMART NAS capability for accelerating transformation of the NAS.

(b) SUBFACTOR B: KEY PERSONNEL

1. NASA will evaluate the relevant experience and background of proposed key personnel and their time commitment towards the SMART NAS procurement to assess the offeror's understanding of what will be required to fulfill the requirements of this contract.

(c) SUBFACTOR C: SMALL BUSINESS UTILIZATION

The evaluation of Small Business Subcontracting and Commitment to the Small Business Program applies to all Offerors, except that Small Businesses are not required to submit a Small Business Subcontracting Plan.

1. Small Business Subcontracting

(i) The **Small Business Subcontracting Plan** will be evaluated in terms of the offeror's proposed subcontracting goals (overall subcontracting goals and individual subcontracting goals by small business category) in comparison to the Contracting Officer's assessment of the appropriate subcontracting goals for this procurement. The offeror's Small Business Subcontracting Plan will also be evaluated in terms of meeting the requirements of FAR 19.704, Subcontracting Plan Requirements. The evaluation of the Small Business Subcontracting Plan will be on the basis of total contract value.

(ii) Small businesses are not required to submit subcontracting plans. NASA will only evaluate the amount of work proposed to be performed by the small business prime and any small business at the first tier subcontract level. The proposed amount of work to be done by the prime small business and first tier small business subcontractors will be evaluated against the Contracting Officer's assessment of the overall subcontracting goal for this procurement. Individual subcontracting goals by small business categories will not be evaluated for small business primes and their first tier subcontractors.

2. Commitment to Small Businesses

(i) NASA will evaluate the extent to which any work performed by a small business subcontractor(s) is identified as "high technology." NASA also will evaluate the extent of commitment to use the subcontractor(s) (enforceable vs.

non-enforceable commitments.)

(ii) NASA will evaluate the extent to which the identity of the small business subcontractor is specified in the proposal as well as the extent of the commitment to use small businesses. (For small business offerors, NASA will evaluate this only if subcontracting opportunities exist.)

(iii) NASA will evaluate the offeror's established or planned procedures and organizational structure for small business outreach, assistance, participation in the Mentor Protégé program, counseling, market research and small business identification, and relevant purchasing procedures. (For large businesses offerors, this information should conform to its submitted Small Business Subcontracting Plan. For small business offerors, NASA will evaluate this only if subcontracting opportunities exist.)

(End of provision)

M.3 EVALUATION FINDINGS

The Government will evaluate each proposal for acceptability. In addition the Government will classify findings using the following definitions:

Weakness – a flaw in the proposal that increases the risk of unsuccessful contract performance.

Significant Weakness – a proposal flaw that appreciably increases the risk of unsuccessful contract performance.

Deficiency – a material failure of a proposal to meet a Government requirement or a combination of significant weaknesses in a proposal that increases the risk of unsuccessful contract performance to an unacceptable level.

Strength – a proposal area that enhances the potential for successful performance or contributes toward exceeding the contract requirements in a manner that provides additional value to the government (this could be associated with a process, technical approach, materials, facilities, etc.).

Significant Strength– a proposal area that greatly enhances the potential for successful performance or contributes significantly toward exceeding the contract requirements in a manner that provides additional value to the government.

Weights and Scoring

In accordance with NFS 1815.304-70(b) (1), the Mission Suitability factor will be weighted and scored on a 1000 point scale. The weights (points) associated with the Mission Suitability subfactors are as follows:

	Subfactor Description	Points
Subfactor A	TECHNICAL APPROACH	700
Subfactor B	KEY PERSONNEL	250
Subfactor C	SMALL BUSINESS UTILIZATION	50
	Total	1000

The Mission Suitability subfactors will be evaluated using the adjectival rating, definitions, and percentile ranges below. The maximum points available for each subfactor will be multiplied by the assessed percent for each subfactor to derive the score for the particular subfactor. For example, if a subfactor has possible 400 points and receives a percent rating 80, then the score for that subfactor would be 320 points

Mission Suitability subfactors and the total Mission Suitability factor will be evaluated using the following adjectival ratings, definitions, and percentile ranges:

ADJECTIVAL RATING	DEFINITIONS	PERCENTILE RANGE
Excellent	A comprehensive and thorough proposal of exceptional merit with one or more significant strengths. No deficiency or significant weakness exists.	91-100
Very Good	A proposal having no deficiency and which demonstrates over-all competence. One or more significant strengths have been found, and strengths outbalance any weaknesses that exist.	71-90
Good	A proposal having no deficiency and which shows a reasonably sound response. There may be strengths or weaknesses, or both. As a whole, weaknesses not off-set by strengths do not significantly detract from the offeror's response.	51-70
Fair	A proposal having no deficiency and which has one or more weaknesses. Weaknesses outbalance any strengths.	31-50
Poor	A proposal that has one or more deficiencies or significant weaknesses that demonstrate a lack of overall competence or would require a major proposal revision to correct.	0-30

(End of text)

M.4 PAST PERFORMANCE EVALUATION FACTOR

For purposes of this provision, "offeror" includes the prime offeror together with any significant subcontractors. Overall ratings will be based on the combined past performance of the prime and all significant subcontractors. The Past Performance factor will evaluate each offeror's record of performing services or delivering products that are similar in size, content, and complexity to the requirements of this solicitation. The overall confidence rating assigned to Past Performance (see below) will reflect a subjective evaluation of the information contained in the written narrative; and other references, if any, that the Government may contact for additional past performance information. Offerors without a record of relevant past performance, or for whom information on past performance is not available, shall receive a neutral rating in accordance with FAR 15.305(a) (2) (IV).

Past Performance Ratings – The level of confidence ratings set forth below will be used to evaluate the Past Performance factor for each offeror.

Each of the adjective ratings below has a "performance" component and a "relevance" component. The following adjectival rating guidelines will be used when subjectively assessing both components. In assessing relevance, the Government will consider the degree of similarity in size, content, and complexity to the requirements in this solicitation, as well as how current is the past performance.

In assessing performance, the Government will make an assessment of the offeror's overall performance record. The Government will evaluate the offeror's past performance record for meeting technical; schedule; cost; management and other contract requirements.

Very High Level of Confidence

The Offeror's relevant past performance is of exceptional merit and is very highly pertinent to this acquisition; indicating exemplary performance in a timely, efficient, and economical manner; very minor (if any) problems with no adverse effect on overall performance. Based on the Offeror's performance record, there is a very high level of confidence that the Offeror will successfully perform the required effort.

High Level of Confidence

The Offeror's relevant past performance is highly pertinent to this acquisition; demonstrating very effective performance that would be fully responsive to contract requirements with contract requirements accomplished in a timely, efficient, and economical manner for the most part with only minor problems with little identifiable effect on overall performance. Based on the Offeror's performance record, there is a high level of confidence that the Offeror will successfully perform the required effort.

Moderate Level of Confidence

The Offeror's relevant past performance is pertinent to this acquisition, and it demonstrates effective performance; fully responsive to contract requirements; reportable problems, but with little identifiable effect on overall performance. Based on the Offeror's performance record, there is a moderate level of confidence that the Offeror will successfully perform the required effort.

Low Level of Confidence

The Offeror's relevant past performance is at least somewhat pertinent to this acquisition, and it meets or slightly exceeds minimum acceptable standards; adequate results; reportable problems with identifiable, but not substantial, effects on overall performance. Based on the Offeror's performance record, there is a low level of confidence that the Offeror will successfully perform the required effort. Changes to the Offeror's existing processes may be necessary in order to achieve contract requirements.

Very Low Level of Confidence

The Offeror's relevant past performance does not meet minimum acceptable standards in one or more areas; remedial action required in one or more areas; problems in one or more areas which adversely affect overall performance. Based on the Offeror's performance record, there is a very low level of confidence that the Offeror will successfully perform the required effort.

Neutral

In the case of an Offeror without a record of relevant past performance or for whom information on past performance is not available, the Offeror may not be evaluated favorably or unfavorably on past performance [see FAR 15.305(a) (2) (ii) and (iv)].

(End of provision)

M.5 PRICE EVALUATION FACTOR

This is a firm fixed price acquisition. Price will be evaluated but not rated.

The overall price for evaluation purposes will be the sum of the prices proposed for Items #1 - #12, Contract Delivery and Payment Schedule, Attachment J.4.

The prices for travel items 13a – 13i shall be evaluated for price reasonableness only, with consideration given to the location of the offeror's place of business (i.e., distances required for travel to ARC and/or LaRC)

(End of provision)

M.6 ORGANIZATIONAL CONFLICTS OF INTEREST

NASA will evaluate the offeror's Organizational Conflicts of Interest Avoidance Plan for acceptability, to determine if all safeguards are in place to maintain control, handling and non-disclosure of sensitive data in conformance with

ARC 52.22-93 Management and Protection of Data and ARC 52.227-96 Handling of Data, as well as all the requirements identified in Clause H.5 - Organizational Conflicts of Interest, and Limitation on Future Contracting, and Section I.1 NFS 1852.237-72 – Access to Sensitive Information relative to the offeror’s understanding and proposed methodology for implementation of the above contract requirements. The Plan will also be reviewed to ensure it addresses and provides a methodology to resolve fully all potential issues of impaired objectivity.

(End of Clause)

[END OF SECTION M]