

<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b> <i>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, &amp; 30</i>				1. REQUISITION NUMBER 4200546900		PAGE OF 1 19	
2. CONTRACT NO.		3. AWARD/ EFFECTIVE DATE	4. ORDER NUMBER		5. SOLICITATION NUMBER NNA15546900Q		6. SOLICITATION ISSUE DATE 09/10/2015
7. <b>FOR SOLICITATION INFORMATION CALL:</b>		a. NAME Gary Shelley			b. TELEPHONE NUMBER (No collect calls) 6506040065		8. OFFER DUE DATE/LOCAL TIME
9. ISSUED BY NASA/Ames Research Center Acquisition Division M/S 241-1 Moffett Field CA 94035-0001			CODE ARC	10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED OR <input type="checkbox"/> SET ASIDE: % FOR:  <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> HUBZONE SMALL BUSINESS <input type="checkbox"/> SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS <input type="checkbox"/> WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOMEN-OWNED SMALL BUSINESS PROGRAM <input type="checkbox"/> EDWOSB <input type="checkbox"/> 8(A)		NAICS: 333316  SIZE STANDARD: 1000	
11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE		12. DISCOUNT TERMS		<input type="checkbox"/> 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		13b. RATING	
15. DELIVER TO NASA Ames Research Center Bldg. 255-3, Receiving Station Moffett Field CA 940350001			CODE	16. ADMINISTERED BY NASA/Ames Research Center Acquisition Division M/S 241-1 Moffett Field CA 94035-0001			
17a. CONTRACTOR/ OFFEROR		CODE	FACILITY CODE	18a. PAYMENT WILL BE MADE BY			
TELEPHONE NO.				18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM			
<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER							
19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
001	Simulator Projectors INCO TERMS 2: Destination  Thirteen (13) Projectors and Lenses meeting the minimum requirements in Appendix 1 of the Statement of Work.  Continued ... <i>(Use Reverse and/or Attach Additional Sheets as Necessary)</i>			1	JB		
25. ACCOUNTING AND APPROPRIATION DATA						26. TOTAL AWARD AMOUNT (For Govt. Use Only)	
<input checked="" type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA				<input checked="" type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.			
<input type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA				<input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.			
<input type="checkbox"/> 28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN _____ COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED.				<input type="checkbox"/> 29. AWARD OF CONTRACT: _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:			
30a. SIGNATURE OF OFFEROR/CONTRACTOR				31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)			
30b. NAME AND TITLE OF SIGNER (Type or print)			30c. DATE SIGNED	31b. NAME OF CONTRACTING OFFICER (Type or print)		31c. DATE SIGNED	
				Bethany A. McClave			

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	<p>Simulator Projector Sysystem</p> <p>PART 001: 13 Projectors w/ Lens, in accordance with (IAW) Section 5.1 of the Statement of Work (SOW)</p> <p>PART 002: Initial Set-up and Optimization Plan IAW Section 5.2 of the SOW</p> <p>PART 003: Off-site maintenance and repairs for five (5) years IAW Section 5.3 of SOW</p>				

32a. QUANTITY IN COLUMN 21 HAS BEEN

RECEIVED     INSPECTED     ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: \_\_\_\_\_

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
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32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE
	32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
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38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY
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41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT	42a. RECEIVED BY ( <i>Print</i> )	
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	41c. DATE	42b. RECEIVED AT ( <i>Location</i> )
	42c. DATE REC'D ( <i>YY/MM/DD</i> )	42d. TOTAL CONTAINERS

**CONTINUATION OF SF1449**

**ADDENDUM TO 52.212-1, INSTRUCTIONS TO OFFERORS - COMMERCIAL ITEMS**

By adding/changing information to the below referenced paragraphs, Instruction to Offerors—Commercial Items, FAR 52.212-1 is hereby tailored as follows:

(h) Only one single award will be made as a result of this solicitation.

The following paragraph(s) are hereby deleted from the Clause 52.212-1: (i).

**THE FOLLOWING PARAGRAPH IS ADDED:**

**(m) SOLICITATION PHASE INSTRUCTIONS—GENERAL**

1. Instructions: This section of the instructions to offerors prescribes the method by which the solicitation will occur. These instructions are designed to ensure the submission of necessary information at the proper phases of this solicitation. The solicitation shall be conducted in the following three (3) phases:

**PHASE I:** Submission of equipment specifications in response to Sections 4.1, 4.2 and the minimum requirements of Appendix A in Attachment #1: Statement of Work (SOW).

**PHASE II:** Required Onsite Demonstration in accordance with (IAW) Section 4.3 Projector Demonstration of the SOW.

**PHASE III:** Offeror submission of final quotes for PARTs 001 -003.

Those offerors whose quotes are found technically acceptable during Phase I will be considered in the “competitive range” and will be allowed to participate in Phase II.

All Phase II participants are required to provide an “onsite demonstration” and must coordinate with the Contract Specialist in setting a date and time for their demonstration. Any Phase II participant who fails to arrange a date and time or provide an onsite demonstration during the time allotted will be considered unresponsive and removed from the competitive range.

After all demonstrations have been completed, Phase III allows the offerors to submit their final quotes for PARTs 001 -003.

PART	Description	QTY	Unit
001	Projector w/ Lens, in accordance with (IAW) Section 5.1 of the Statement of Work (SOW)	13	EA
002	Initial Set-up and Optimization Plan IAW Section 5.2 of the SOW	1	EA
003	Off-site maintenance and repairs for five (5) years IAW Section 5.3 of SOW	1	EA

2. Proposal Format: The proposal submitted for Phase III PART 002 and 003 shall be on 8 ½” x 11” paper. The maximum page limit for this proposal shall be five (5) pages. The Spare Parts List is not considered towards the page count. **Elaborate formats, bindings or color presentations are not desired or required.**

3. Formal Communications:

(a) Questions or comments regarding this solicitation must be submitted by email, citing the solicitation number, and be directed to the following Government representative:

Name: Gary A. Shelley  
Address: NASA Ames Research Center  
M/S 241-1  
Moffett Field, CA 94035-0001  
FAX: None  
Email: gary.a.shelley@nasa.gov

Oral questions will not be answered due to the possibility of misunderstandings or misinterpretations.

(b) Questions or comments should be submitted by email with the following deadlines:

**Phase I:** September 17, 2015 by 10:00 a.m. PST

**Phase II:** One (1) business day following the conclusion of the on-site demonstrations.

**Phase III:** TBD to allow for analysis and dissemination of responses in advance of the proposal due date. Late questions or comments are not guaranteed a response prior to the proposal due date.

(c) Questions or comments shall not be directed to any technical activity personnel, and will only be answered to provide clarifications of the solicitation process.

4. Response Dates: The response dates for the three (3) Phases are listed as follows:

**Phase I:** September 25, 2015 at 12:00 P.M. PST

**Phase II:** Not Applicable

**Phase III:** TBD

(End of provision)

**52.212-2 Evaluation - Commercial Items. (OCT 2014)**

(a) The Government will award a contract resulting from this solicitation to the responsible offeror whose offer, conforming to the solicitation, will be most advantageous to the Government, price and other factors considered. The following factors shall be used to evaluate offers:

**Factor 1. Technical Capability**

Sub-factor A. Equipment list must meet or exceed the minimum requirements in accordance with **Sections 4.1 and 4.2 of the Statement of Work (SOW)**.

Sub-factor B: Offeror must successfully demonstrate their ability to provide a project solution in accordance with **Section 4.3 Project Demonstration** of the SOW.

Sub-factor C: Offeror must show its ability to provide all the deliverables addressed in Section 5.0 "Deliverables" of the SOW.

**Factor 2. Price**

**Technical Capability is more important than Price.**

(b) *Options.* The Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. The Government may determine that an offer is unacceptable if the option prices are significantly unbalanced. Evaluation of options shall not obligate the

Government to exercise the option(s).

(c) A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

(End of provision)

**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):

FAR: <http://www.acquisition.gov/far/>

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

(End of provision)

**52.252-2 Clauses Incorporated by Reference. (FEB 1998)**

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

FAR: <http://www.acquisition.gov/far/>

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

(End of clause)

**FAR PROVISIONS/CLAUSES INCORPORATED BY REFERENCE**

52.204-9 Personal Identity Verification of Contractor Personnel. (JAN 2011)

52.212-3 Offeror Representations and Certifications -- Commercial Items - Alternate I (MAR 2015)

52.212-4 Contract Terms and Conditions - Commercial Items. (MAY 2015)

52.204-7 System for Award Management. (JUL 2013)

52.209-2 Prohibition on Contracting With Inverted Domestic Corporations-Representation. (DEC 2014)

52.225-25 Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran—Representation and Certification (Dec 2012)

**1852.215-84 Ombudsman. (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 email address may be found at: [http://prod.nais.nasa.gov/pub/pub\\_library/Omb.html](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)

#### **1852.223-72 Safety and Health (Short Form). (JUL 2015)**

(a) Safety is the freedom from those conditions that can cause death, injury, occupational illness; damage to or loss of equipment or property, or damage to the environment. NASA is committed to protecting the safety and health of the public, our team members, and those assets that the Nation entrusts to the Agency.

(b) The Contractor shall have a documented, comprehensive and effective health and safety program with a proactive process to identify, assess, and control hazards and take all reasonable safety and occupational health measures consistent with standard industry practice in performing this contract.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c) in subcontracts that exceed the simplified acquisition threshold where work will be conducted completely or partly on Federally-controlled facilities.

(End of clause)

#### **PERIOD OF PERFORMANCE**

The period of performance of this contract is 60 Days After Receipt of Order (ARO)

(End of clause)

#### **PLACE OF PERFORMANCE - SERVICES**

The services to be performed under this contact shall be performed at the following location(s):

NASA Ames Research Center  
FutureFlight Central  
Bldg. N239  
Moffett Field, CA 94035-0001

(End of clause)

#### **DELIVERY INSTRUCTIONS**

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

NASA Ames Research Center  
Mail Stop 255-3, Receiving Station  
Moffett Field, CA 94035-0001  
Marked for:  
Consignee: TBD  
Contract Number: TBD

Organization/Office Code: AFS  
Building No.: 255-3, Receiving Station

(b) Unless otherwise authorized in advance by the Contracting Officer, deliveries under this contract shall be made between the hours of 8:00 a.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)

**52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS - COMMERCIAL ITEMS. (MAY 2015)**

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.209-10, Prohibition on Contracting with Inverted Domestic Corporations (DEC 2014)

(2) 52.233-3, Protest After Award (AUG 1996) (31 U.S.C. 3553).

(3) 52.233-4, Applicable Law for Breach of Contract Claim (OCT 2004) (Public Laws 108-77 and 108-78 (19 U.S.C. 3805 note)).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items: (Contracting Officer check as appropriate.)

X (1) 52.203-6, Restrictions on Subcontractor Sales to the Government (SEP 2006), with Alternate I (OCT 1995) (41 U.S.C. 4704 and 10 U.S.C. 2402).

X (2) 52.203-13, Contractor Code of Business Ethics and Conduct (APR 2010) (41 U.S.C. 3509).

(3) 52.203-15, Whistleblower Protections under the American Recovery and Reinvestment Act of 2009 (JUN 2010) (Section 1553 of Pub. L. 111-5). (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009.)

X (4) 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards (JUL 2013) (Pub. L. 109-282) (31 U.S.C. 6101 note).

(5) (Reserved)

(6) 52.204-14, Service Contract Reporting Requirements (JAN 2014) (Pub. L. 111-117, section 743 of Div. C).

(7) 52.204-15, Service Contract Reporting Requirements for Indefinite-Delivery Contracts (JAN 2014) (Pub. L. 111-117, section 743 of Div. C).

X (8) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment. (AUG 2013) (31 U.S.C. 6101 note).

X (9) 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matters (JUL 2013) (41 U.S.C. 2313).

(10) (Reserved)

(11)(i) 52.219-3, Notice of HUBZone Set-Aside or Sole-Source Award (NOV 2011) (15 U.S.C. 657a).

(ii) Alternate I (NOV 2011) of 52.219-3.

(12)(i) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (OCT 2014) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).

(ii) Alternate I (JAN 2011) of 52.219-4.

(13) (Reserved)

(14)(i) 52.219-6, Notice of Total Small Business Set-Aside (NOV 2011) (15 U.S.C. 644).

(ii) Alternate I (NOV 2011).

(iii) Alternate II (NOV 2011).

(15)(i) 52.219-7, Notice of Partial Small Business Set-Aside (JUN 2003) (15 U.S.C. 644).

(ii) Alternate I (OCT 1995) of 52.219-7.

(iii) Alternate II (MAR 2004) of 52.219-7.

(16) 52.219-8, Utilization of Small Business Concerns (OCT 2014) (15 U.S.C. 637(d)(2) and (3)).

(17)(i) 52.219-9, Small Business Subcontracting Plan (OCT 2014) (15 U.S.C. 637(d)(4)).

(ii) Alternate I (OCT 2001) of 52.219-9.

(iii) Alternate II (OCT 2001) of 52.219-9.

(18) 52.219-13, Notice of Set-Aside of Orders (NOV 2011) (15 U.S.C. 644(r)).

(19) 52.219-14, Limitations on Subcontracting (NOV 2011) (15 U.S.C. 637(a)(14)).

(20) 52.219-16, Liquidated Damages-Subcontracting Plan (JAN 1999) (15 U.S.C. 637(d)(4)(F)(i)).

(21) 52.219-27, Notice of Service-Disabled Veteran-Owned Small Business Set-Aside (NOV 2011) (15 U.S.C. 657f).

(22) 52.219-28, Post Award Small Business Program Re-representation (JUL 2013) (15 U.S.C. 632(a)(2)).

(23) 52.219-29, Notice of Set-Aside for Economically Disadvantaged Women-Owned Small Business (EDWOSB) Concerns (JUL 2013) (15 U.S.C. 637(m)).

(24) 52.219-30, Notice of Set-Aside for Women-Owned Small Business (WOSB) Concerns Eligible Under the WOSB Program (JUL 2013) (15 U.S.C. 637(m)).

X (25) 52.222-3, Convict Labor (JUN 2003) (E.O. 11755).

- X (26) 52.222-19, Child Labor-Cooperation with Authorities and Remedies (JAN 2014) (E.O. 13126).
- X (27) 52.222-21, Prohibition of Segregated Facilities (APR 2015).
- X (28) 52.222-26, Equal Opportunity (APR 2015) (E.O. 11246).
- (29) 52.222-35, Equal Opportunity for Veterans (JUL 2014) (38 U.S.C. 4212).
- X (30) 52.222-36, Equal Opportunity for Workers with Disabilities (JUL 2014) (29 U.S.C. 793).
- (31) 52.222-37, Employment Reports on Veterans (JUL 2014) (38 U.S.C. 4212).
- (32) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (DEC 2010) (E.O. 13496).
- X (33)(i) 52.222-50, Combating Trafficking in Persons (MAR 2015) (22 U.S.C. chapter 78 and E.O. 13627).
- (ii) *Alternate I* (MAR 2015) of 52.222-50 (22 U.S.C. chapter 78 and E.O. 13627).
- (34) 52.222-54, Employment Eligibility Verification (AUG 2013). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)
- (35)(i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Items (MAY 2008) (42 U.S.C. 6962(c)(3)(A)(ii)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- (ii) *Alternate I* (MAY 2008) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)). (Not applicable to the acquisition of commercially available off-the-shelf items.)
- (36)(i) 52.223-13, Acquisition of EPEAT®-Registered Imaging Equipment (JUN 2014) (E.O.s 13423 and 13514).
- (ii) *Alternate I* (JUN 2014) of 52.223-13.
- (37)(i) 52.223-14, Acquisition of EPEAT®-Registered Televisions (JUN 2014) (E.O.s 13423 and 13514).
- (ii) *Alternate I* (JUN 2014) of 52.223-14.
- (38) 52.223-15, Energy Efficiency in Energy-Consuming Products (DEC 2007) (42 U.S.C. 8259b).
- (39)(i) 52.223-16, Acquisition of EPEAT®-Registered Personal Computer Products (JUN 2014) (E.O.s 13423 and 13514).
- (ii) *Alternate I* (JUN 2014) of 52.223-16.
- X (40) 52.223-18, Encouraging Contractor Policies to Ban Text Messaging While Driving (AUG 2011)
- (41) 52.225-1, Buy American-Supplies (MAY 2014) (41 U.S.C. chapter 83).
- (42)(i) 52.225-3, Buy American-Free Trade Agreements-Israeli Trade Act (MAY 2014) (41 U.S.C. chapter 83, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, 19 U.S.C. 3805 note, 19 U.S.C. 4001 note, Pub. L. 103-182, 108-77, 108-78, 108-286, 108-302, 109-53, 109-169, 109-283, 110-138, 112-41, 112-42, and 112-43).

(ii) Alternate I (MAY 2014) of 52.225-3.

(iii) Alternate II (MAY 2014) of 52.225-3.

(iv) Alternate III (MAY 2014) of 52.225-3.

(43) 52.225-5, Trade Agreements (NOV 2013) (19 U.S.C. 2501, *et seq.*, 19 U.S.C. 3301 note).

X (44) 52.225-13, Restrictions on Certain Foreign Purchases (JUN 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

(45) 52.225-26, Contractors Performing Private Security Functions Outside the United States (JUL 2013) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302 Note).

(46) 52.226-4, Notice of Disaster or Emergency Area Set-Aside (NOV 2007) (42 U.S.C. 5150).

(47) 52.226-5, Restrictions on Subcontracting Outside Disaster or Emergency Area (NOV 2007) (42 U.S.C. 5150).

(48) 52.232-29, Terms for Financing of Purchases of Commercial Items (FEB 2002) (41 U.S.C. 4505, 10 U.S.C. 2307(f)).

(49) 52.232-30, Installment Payments for Commercial Items (OCT 1995) (41 U.S.C. 4505, 10 U.S.C. 2307(f)).

X (50) 52.232-33, Payment by Electronic Funds Transfer-System for Award Management (JUL 2013) (31 U.S.C. 3332).

(51) 52.232-34, Payment by Electronic Funds Transfer - Other than System for Award Management (JUL 2013) (31 U.S.C. 3332).

(52) 52.232-36, Payment by Third Party (MAY 2014) (31 U.S.C. 3332).

(53) 52.239-1, Privacy or Security Safeguards (AUG 1996) (5 U.S.C. 552a).

(54)(i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631).

(ii) Alternate I (APR 2003) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items: (Contracting Officer check as appropriate.)

(1) 52.222-17, Nondisplacement of Qualified Workers (MAY 2014) (E.O. 13495).

(2) 52.222-41, Service Contract Labor Standards (MAY 2014) (41 U.S.C. chapter 67).

(3) 52.222-42, Statement of Equivalent Rates for Federal Hires (MAY 2014) (29 U.S.C. 206 and 41 U.S.C. chapter 67).

(4) 52.222-43, Fair Labor Standards Act and Service Contract Labor Standards-Price Adjustment (Multiple Year and Option Contracts) (MAY 2014) (29 U.S.C. 206 and 41 U.S.C. chapter 67).

[] (5) 52.222-44, Fair Labor Standards Act and Service Contract Labor Standards-Price Adjustment (MAY 2014) (29 U.S.C 206 and 41 U.S.C. chapter 67).

[] (6) 52.222-51, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (MAY 2014) (41 U.S.C. chapter 67).

[] (7) 52.222-53, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Requirements (MAY 2014) (41 U.S.C. chapter 67).

[] (8) 52.222-55, Minimum Wages Under Executive Order 13658 (Dec 2014) (E.O. 13658).

[] (9) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations (MAY 2014) (42 U.S.C. 1792).

[] (10) 52.237-11, Accepting and Dispensing of \$1 Coin (SEP 2008) (31 U.S.C. 5112(p)(1)).

(d) *Comptroller General Examination of Record.* The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records - Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in this paragraph (e)(1) of this paragraph in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause-

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (APR 2010) (41 U.S.C. 3509).

(ii) 52.219-8, Utilization of Small Business Concerns (OCT 2014) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$650,000 (\$1.5 million for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iii) 52.222-17, Nondisplacement of Qualified Workers (MAY 2014) (E.O. 13495). Flow down required in accordance with paragraph (l) of FAR clause 52.222-17.

(iv) 52.222-21, Prohibition of Segregated Facilities (APR 2015).

- (v) 52.222-26, Equal Opportunity (APR 2015) (E.O. 11246).
  - (vi) 52.222-35, Equal Opportunity for Veterans (JUL 2014) (38 U.S.C. 4212).
  - (vii) 52.222-36, Equal Opportunity for Workers with Disabilities (JUL 2014) (29 U.S.C. 793).
  - (viii) 52.222-37, Employment Reports on Veterans (JUL 2014) (38 U.S.C. 4212).
  - (ix) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (DEC 2010) (E.O. 13496). Flow down required in accordance with paragraph (f) of FAR clause 52.222-40.
  - (x) 52.222-41, Service Contract Labor Standards (MAY 2014) (41 U.S.C. chapter 67).
  - (xi) \_\_ (A) 52.222-50, Combating Trafficking in Persons (MAR 2015) (22 U.S.C. chapter 78 and E.O. 13627).
  - \_\_ (B) Alternate I (MAR 2015) of 52.222-50 (22 U.S.C. chapter 78 and E.O. 13627).
  - \_\_ Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104(g)).
  - (xii) 52.222-51, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Requirements (MAY 2014) (41 U.S.C. chapter 67).
  - (xiii) 52.222-53, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Requirements (MAY 2014) (41 U.S.C. chapter 67).
  - (xiv) 52.222-54, Employment Eligibility Verification (AUG 2013).
  - (xv) 52.222-55, Minimum Wages Under Executive Order 13658 (DEC 2014) (E.O. 13658).
  - (xvi) 52.225-26, Contractors Performing Private Security Functions Outside the United States (JUL 2013) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302 Note).
  - (xvii) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations (MAY 2014) (42 U.S.C. 1792). Flow down required in accordance with paragraph (e) of FAR clause 52.226-6.
  - (xviii) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.
- (2) While not required, the contractor May include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(End of clause)

# **ATTACHMENT #1**

## **STATEMENT OF WORK FOR FFC REPLACEMENT PROJECTOR PROJECT**

### **1.0 Introduction/ Background**

The National Aeronautics and Space Administration (NASA) is seeking to select and procure 13 projectors to replace the current projectors in its Future Flight Central (FFC) simulation facility. NASA's Future Flight Central (FFC) is an airport Air Traffic Control (ATC) Tower simulation facility supporting research into problems at the nation's airports, Unmanned Aircraft Systems integration into the national airspace, and other research requiring visually immersive environments. The facility provides a detailed, realistic 3-D database modeling capability, projected on twelve screens, to provide a 360-degree out-the-window view. The facility also has an extensive video streaming capability for observation and control of distributed simulations and remote operations. The facility is used to develop new automation concepts and evaluate new ATC systems and related technologies.

### **2.0 Scope of Work:**

The FFC visual presentation consists of 12 flat rear projection screens, which are 150" on the diagonal [90.75" vertical by 121" horizontal] and have a 4:3 aspect ratio.

NASA requires the new projectors to replace the existing 12 projectors that will provide the out-the-window scene in the tower simulator in the FFC. At least one spare projector will also be purchased. The new projectors shall support the 4:3 aspect ratio either natively, or by other means. The projectors shall have the ability to fill the screen at the 4:3 aspect ratio with a throw distance of 90 inches or less. The contractor shall provide information about the method of projecting a 4:3 aspect ratio image within the throw distance required to fill an FFC screen. The contractor shall provide the projectors, lenses, documentation, and support for initial set up and optimization of the projectors after installation. NASA will design, construct, and install the mounting hardware for the new projection system, physically mount the projectors in FFC, and install necessary cabling and power.

### **3.0 Applicable Documents**

The following picture of the control tower cab in the FFC shows the central workspace surrounded by the projection screens, mirrors, and projectors. The drawing contains dated renderings of the projectors, but accurately reflects the current layout of the facility. The new projector procurement will remove the mirrors from the light path.



The projection surface consists of 12 flat screens placed around the internal workspace. The screens are 150” diagonal [90.75” vertical by 121” horizontal] Stewart “Optawave” Fresnel/Lenticular rear projection screens [ref: Appendix 1 “Stewart Optascreen.pdf”] with a 4:3 aspect ratio.

**Note -** A site visit will be scheduled for prospective contractors during the solicitation phase.

#### **4.0 Description of Technical Requirements:**

- 4.1 The contractor shall provide the customer with projectors and lenses meeting the minimum requirements listed in Appendix 1.
- 4.2 The contractor shall also provide:
  - 4.2.1 The initial cost for each projector including lens.
  - 4.2.2 Cost of operation and scheduled maintenance over 5 years if the projector is operated 8 hours per day, 5 days per week, and 52 weeks per year at full brightness.
  - 4.2.3 Mean time between failures for the projector.

- 4.2.4 Information on the network connectivity of the projector, including descriptions of all functions that can be accessed remotely for operations, set up and maintenance of the projector.
- 4.2.5 Information regarding extended capabilities that would allow automated color balancing or black level management for an individual projector or across multiple projectors.
- 4.2.6 Information regarding extended capabilities that would allow storage and retrieval of calibration parameters for multiple projectors from a single preset.
- 4.2.7 Information about the stability of brightness, color and geometric calibration across hours of operation between required maintenance.
- 4.2.8 Information regarding projector features that minimize horizontal motion artifacts such as temporal aliasing, smearing or ghosting.
- 4.2.9 A list of all OEM and third party contractor software and licensing required to operate and maintain the projectors
- 4.2.10 Information about off-site maintenance and repair options, to include spare parts and consultation (phone and one site) for at least 5 years.

#### 4.3 Projector demonstration

- 4.3.1 All projectors that have passed initial evaluation shall be required to demonstrate at least one projector in the FFC facility to ensure that the direct projection solution does not create image problems with the existing screens. Contractors are encouraged, but not required, to provide two projectors if possible. Projectors will be evaluated for both observable and measureable anomalies using internal test patterns and images produced by the FFC image generation systems. A Subject Matter Expert (SME) Air Traffic Controller will also conduct an evaluation of projector performance under simulation conditions.

NASA will provide appropriate mounting such that the projector(s) will be aligned with the center of the projection screen at the required throw distance. The contractor shall calibrate the test projector(s) to provide a full screen, 4:3 aspect ratio image supporting 1600 x 1200 at 60Hz image as presented by the FFC image generation system.

NASA will provide a single link DVI-D connection between the FFC image generation system and the test projector.

4.3.2 Interaction between the projector and the existing screen(s) will be evaluated for compliance with specifications in Table 1 and for visual artifacts with internal projector test patterns, an FFC Image Generation System database, and 1080P HD video inputs. Visual artifacts may include, but are not limited to:

4.3.2.1 Variations in linearity, brightness, contrast, color, focus, and dark field performance

4.3.2.2 Observable patterning anomalies such as rainbow effects, color fringing, color banding, dithering, screen door effect, moire pattern, hot spots etc.

4.3.2.3 Aliasing, blurring or smearing of objects in motion

4.3.3 The projected image will also be evaluated by an SME Air Traffic Controller to ensure that the projectors meet NASA's research requirements. The SME evaluation will include, but is not limited to:

4.3.3.1 Out-the-window scenes representing light levels for various times of day including; dawn, dusk, high noon and midnight

4.3.3.2 Ability to recognize an aircraft at an appropriate distance from the runway

4.3.3.3 Ability to recognize airline liveries at an appropriate distance from the tower

4.3.3.4 Adequate representation of aircraft and ground lighting

4.3.3.5 Absence of distracting visual artifacts

## **5.0 Deliverables:**

5.1 The contractor shall provide 13 projectors and lens and all additional required software, licenses, and hardware to operate the projectors.

5.2 The contractor shall provide, as a separately priced item, a plan to support the initial set up and optimization of the projectors.

5.3 Documentation

- 5.3.1 The contractor shall provide all maintenance and operational documentation with the projectors.
- 5.3.2 The contractor shall provide a recommended spares list and pricing for the spares.
- 5.3.3 The contractor shall provide the requested information listed in Section 4.2.

#### **6.0 Period of Performance/Delivery**

- 6.1 The period of performance (PoP) will be 60 days after receipt of order (ARO).
- 6.2 Performance will be conducted at the following location:
  - NASA Ames Research Center
  - Bldg. N239
  - Moffett Field, CA 94035-0001

## Appendix A

**Table 1: Projector Requirements**

<u>Element</u>	<u>Criteria</u>
Projection	Rear projection capabilities
Brightness	≥ 1000 lumens
Contrast Ratio	≥ 5,000:1 dynamic contrast
Uniformity	≥ 95% brightness and color uniformity
Resolution	≥ 1600 x 1200 @ 60 Hz up to 2048 x 1536 @ 120 Hz refresh
Video Signal Format	Analog: RGBHV, RGBS, RGsB, 0.7 VPP video - 0.3 composite sync Digital: Single Link DVI up to 165 Mhz pixel clock
Video Signal Connection	Analog: VGA [HD 15] or BNC [5 connector] Digital: DVI-D
Color Gamut	Full Spectrum sRGB/CIE 1976 with internal color calibration capability
Geometric Correction	Internal geometry correction within ≤ ½ line width variation full screen
Projector Presets	Ability to store and retrieve preset color and geometry calibration parameters
White Point	D6500
Motion Artifacts	Features to reduce horizontal temporal aliasing etc.
Aspect Ratio	4:3 full screen projection
Network Connectivity	Network connectivity for projectors is required
Lens type	Short Throw, Fixed Focus without discernable chromatic aberration
Lens Throw Distance	≤ 90 inches for full screen projection of 4:3 aspect ratio image
Lens Shift	± 10° H & V lens shift capability
Power	100-120 VAC 60 Hz
Reliability	≥ 20,000 hrs. MTBF
Warranty	≥ 2 years
Noise	≤ 90 dB at normal operating temperature
Thermal Load	≤ 2000 BTU/hr.
Refresh rate	≥ 60 HZ

Internal Test Patterns	White Field, Black Field, Checkerboard, Cross Hatch, Focus, Color Scale, Gray Scale, Contrast test patterns
Warranty	$\geq 2$ years
Projector Presets	Ability to store and retrieve preset color and geometry calibration parameters, and projector configurations