Questions and Answers #3 to NNC10ZRH007R – Communications and Avionics Installation on NASA GRC T-34 Aircraft

Q – What are the minimum runway requirements for this aircraft? Our facility has 4,000 feet and I am just thinking this may be too short for you.
A – 4,000 feet hard surface runway is acceptable.

Q - Am I just too late now? I noticed a May 5th deadline in some of the correspondence. So what is the timeframe?
A - About the May 5th deadline, you are not too late at all and are more than welcome to submit a proposal. On May 4th we had an Industry Day, which allowed various companies to view the T-34 up close and take pictures and submit questions. See the information posted on the fedbizopps website which includes the notes, pictures, and some Q & A. While you are able to and encouraged to submit a proposal detailing your approach, your only peculiarity will be that you did not have the opportunity to see the plane in person, take pictures up close of it, etc. However this is not required for any company to have a winning proposal.

Q – Is this equipment to be installed all supplied by NASA along with the engineering for installation?
A - No, all specified equipment shall be purchased by the installer and all engineering shall also be completed by the contractor.

Q - In the RFP on page 61, paragraph C it states that the "Past Performance questionnaires" are due "By The Closing Date" of the solicitation. However, in Attachment A, Past Performance Questionnaire, in the instructions on page 2 it indicates that the questionnaires are due by close of business May, 17, 2010. With the close date of the solicitation being May, 24th, 2010 this would make the Past Performance Questionnaires due one week prior to the close date. Is the correct?
A – Past Performance Questionnaires are hereby due on May 24. Offerors are entitled to alter this date on Attachment A, Past Performance Questionnaire, when submitting to contract Points of Contact.

Q – Given the complexity of the effort (the installation of an autopilot as a new system rather than a retrofit to replace an existing unit), would the Government consider changing the NAICS to 336411 or 336413?
A – The Government is unable to change the NAICS code of this Solicitation.

Q – Does all or any part of this contract fall under the requirements of NASA FAR SUP 1804 Contract Clause 1852.204-75 and also 1803.7000?
A – 1852.204-75 – No
1803.7000 – No

Q – Reference 3.0, page 11, 1st paragraph after item (3), the solicitation specifies that "All engineering designs and installation variances shall be approved by a NASA

approved engineering authority (DER, PE, or state licensed engineering firm"). The solicitation also specifies that "the work aircraft will be conducted on a public aircraft and that all final approvals for engineering, modifications and exceptions will come from NASA engineering oversight, not the FAA." Does NASA expect the integrator to obtain DER or other engineering authorization as part of its effort, or will NASA be the sole approval authority for the effort?

A – NASA will be the sole approval for the effort, however it was stated as such in the solicitation specifically to address design risk associated with the expected level of effort. A sign off from a DER would show that from the outset the design has met FAA requirements and a sign off from a Professional Engineer or licensed engineering firm would also indicate that the design has met other acceptable design standards (MILSPEC, SAE etc.). It is felt that this will reduce NASA's procurement risk associated with getting the design approved through NASA's airworthiness process.

Questions and answers specific to certain elements:

- **Base Element – Dual-Cockpit Autopilot System:**
    - Please advise if it is desired that the Fore/Aft Autopilot Transfer Functionality be controlled by the ***Avionics*** ***Take Command/Control Transfer*** Switch, or is it desired that this be controlled by the ***Power System's*** ***Take Command/Control Transfer*** switch. **Avionics Take Command Switch**
    - Is it desired that Manual Electric Trim be provided? **NO- unless the proposed design requires it**
    - Is it desired that Altitude Preselect functionality be provided? **Desired – but not required**
    - Is it desired that Yaw Damper functionality be provided? **Desired but not required**
    - In the event that Option 2 is not selected, is it desired that Flight Director Functionality be provided? **No**
    - Please advise if installing Autopilot/Trim Control switching in the control stick grips is acceptable. **If Electric trim is required then yes**.
    - Regarding Autopilot Disconnect Functionality, is it desired to have the 'off-side' cockpit's ***AUTOPILOT DISCONNECT*** switch be able to affect a forcible Autopilot disconnect? **Yes – both cockpits should be able to disconnect autopilot at any time**
    - Regarding Manual Electric Trim, is it desired to have the 'off-side' cockpit's Trim Switches be functional? **If Electric trim is incorporated then it will be REQUIRED to have the electric trim functional in both cockpits regardless of which cockpit has control.**
    - Is it expected that, in the 'off-side' cockpit, there will be Autopilot State (i.e. engaged, disengaged, test, etc.) indications? **Yes**
    - Is it expected that, in the 'off-side' cockpit, that there will be Autopilot Mode indications? **Yes**

- **Option 1 – Research Computer:**

    - How rigid are the dimensional size restrictions for the research computer device – i.e. is a unit that exceeds a single dimension by <2.5", yet is substantively smaller in other dimensions acceptable for consideration, provided that it meets or *exceeds* all other specified requirements? (REF: page 14, Option 1, initial paragraph)

    A – Exceeding a single dimension by 2.5" is acceptable.

- More specifically, the RFP predicates a unit with a volume not to exceed 715 cubic-inches (via doing the math: WxDxH). Will a unit that has a volume of <500 cubic-inches be a viable-consideration, given a depth dimension <=15.5 inches?

    A – A depth dimension of <=15.5" is acceptable.

- **Option 2 – EFIS and Avionics Package:**

    - Is the existing GNS-430W a TAWS flavored device, or is it a Terrain-only device?

        - The unit's long part # will be helpful in making this determination?
        - **Currently most of NASA GRC's aircraft have GNS-430W nav/comm devices. This was done purposefully for training, logistics and compatibility. Be advised that the GNS 430 is interchangeable with the other aircraft and have in the past been swapped out due to a variety of reasons, if a specific part number is required that should be called out in the SOW.**

    - With respect to the language ***'Instrument Procedures'*** (REF: Page 15, Option 2, initial paragraph) is it expected that Approach Plates be viewable to the aircrew, or is the intent to have Instrument-Procedures Checklist functionality? **Instrument procedures refers to Approach plates, STARS and/or SIDs depicted visually to the pilot.**

- **General Technical Questions:**

    - Are the EHSIs restricted from fully recessing to where they are coplanar with the rest of each cockpit's panel-mounted instrumentation (i.e. were the racks shortened to facilitate a functioning installation in the manner observed at Industry Day, due to depth restrictions)? **The existing EHSI**

in the aft cockpit was limited due to length of the device. It is highly desirable to have devices co-planar to the instrument panel.

- Is it acceptable to relocate Comm3 from the instrument panel to the side console? **Yes**
- Is it acceptable to remove Comm3 entirely? **No**
- Compass Slaving Meter/Controls were not able to be identified via the photos. Please advise if there are any gyro slaving controls for the PN-101. **Cockpit slaving controls for the HSI have been removed from the original Navy configuration as they were not required for the Sandell HSI.**
    - If so, are the slaving controls in the forward cockpit, in the aft cockpit, or both?
- Is it acceptable to consider moving the plane of either instrument panel aft a specified amount (TBD), provided aircraft control is not impeded? **Yes**
- For operational envelope related dialog/considerations, is the aircraft normally operated outside of any of the limitations as depicted in the Type Certificate Data Sheet (being questioned since it is a Public Use airframe)? (REF: Page 14, Option 1, initial paragraph) **NO**
- Is Night Vision Equipment compatibility a desired element for any or all of the solutions to be proposed? **Desired but not required**
- Are there any NASA Flight Test Personnel, who will be involved in the T-34C modification program, that also hold a valid FAA Flight-Test-DER Credential (a Base-Effort Certification Dynamic)? **NO**

Administrative Questions

- Regarding the Past Performance Questionnaire (REF: RFP Attachment A):
    - Is there a minimum or maximum number of Past Performance Questionnaire Responses expected to be submitted by each bidder? **No opinion**
    - Should the Questionnaires represent projects completed in the last 5 years, or are older projects acceptable? **Older but relevant are acceptable**
    - Has the deadline for submission of the Past Performance Questionnaire been slid back to 24May10, to coincide with the Proposal Submission Deadline? - **Yes**
- Can the Contracting Officer facilitate providing the following documents:
    - NA 01-1A-1 (REF: Page 11, second paragraph, item 2)
    - MIL-HDBK-5 and MIL-HDBK-23 (REF: Page 11, 4th paragraph, item 1)
        - MIL-HDBK-5 Cancelled per NOTICE 2, dated 24 March 2006

1. Metallic Materials Properties Development and Standardization (MMPDS) is referenced as alternate guidance.
2. Can the Contracting Officer facilitate access to this alternate guidance?

- MIL-HDBK-23 Cancelled per NOTICE 4, dated 03 February 1988

1. No succeeding guidance referenced in same

- SAE ARP5366 (REF: Page 11, 4th paragraph, item 3)

- **NASA pays for access to many of the documented standards listed above and is unable to provide such service at no cost. The following link http://assist.daps.dla.mil should provide an avenue the solicitors can use to acquire the called out references.**

- NASA Environmental Policy and Regulation (REF: Page 12, first paragraph, item 1)
- NASA Glenn Research Center (GRC) Environmental Programs Manual (REF: Page 12, first paragraph, item 1)
  - **NASA Environmental Policy and GRC Program Manual can be accessed at the following link: http://smad-ext.grc.nasa.gov/shed/pub/epm/epm-manual.pdf**

- Regarding Removed GFE (REF: Page 13, 4th paragraph), is return of same in 'as-removed' condition acceptable, if said equipment is not working at time of removal? **Yes**
- Regarding the Task Deliverables (REF: Page 16, Section 3.2), please detail which events are desired to be conducted at locations other then the bidder's location.

- Please detail, by event, what bidder representation expected (i.e. Please detail who is expected to participate in same - Project Manager, Production Manager, Certification Manager, etc.). **Tasks Deliverables (3.2) Ref 1-4 are planned to be conducted at NASA GRC. Solicitors should plan on having at least one representative on site for these meetings that can address questions and concerns arising from the presentation of the design. Ref 5 will most likely be at the solicitors facility prior to ground and flight evaluation. If one individual is unable to represent the solicitor for all areas expertise required it would be acceptable to have additional technical representation available via WEBEX and/or TELCON.**