

NASA Follow-up Request for Information on Space Shuttle Orbiter Placement

Introduction:

This is a Request for Information (RFI) only and does not constitute a commitment, implied or otherwise, that the National Aeronautics and Space Administration (NASA) will take procurement action in this matter. Further, neither NASA nor the Government will be responsible for any cost incurred in furnishing this information.

This RFI is a follow-up to RFI Reference # NNH09OI001L; Space Shuttle Orbiter and Space Shuttle Main Engine Placement, dated December 17, 2008.

NASA recognizes the interest by educational institutions, science museums, and other appropriate organizations in the acquisition of NASA Shuttle-related property following the last flight of the Space Shuttle. While NASA's priority is flying the remaining Shuttle missions safely, because of the quantity, complexity, and dispersion of the Space Shuttle Program (SSP) assets, successful Space Shuttle transition and retirement requires careful planning prior to program completion, currently scheduled for September 2010.

This RFI is being used to gather additional research for NASA to make decisions regarding placement of Space Shuttle Orbiters and public display after conclusion of the SSP. In light of proposed cost and schedule changes associated with the acquisition and display of the Orbiters, NASA is seeking updated information from educational institutions, science museums, and other appropriate organizations about the community's ability to acquire and display a Space Shuttle Orbiter after the vehicles are retired from flight status.

Changes to Orbiter Transfer Cost and Schedule addressed in this RFI:

1. A recipient will be required to take delivery of an Orbiter between July and December 2011, six months earlier than the May 2012 date included in the December, 2008 RFI. The first Orbiter is scheduled to be delivered in July 2011, with the other Orbiter(s) to follow later.
2. A suitable climate-controlled indoor facility must be available to house the Orbiter when delivered.
3. The cost to complete display preparation for each Orbiter and ferry the Orbiter to its ultimate display location is updated to \$28.8 million. This cost is to be provided to NASA. The \$28.8M cost includes the cost to ferry each Orbiter to its ultimate destination. A recipient will be required to demonstrate to NASA that the recipient possesses the full display preparation and ferrying cost no later than April, 2011. NASA will no longer require that recipients fund safing of the Orbiters. The December, 2008 RFI anticipated that the recipient of the Orbiter would be responsible for funding safing costs.
4. NASA may also have the opportunity to place an unflown Orbiter for display in addition to the two retired Orbiters discussed in the Original RFI.
5. This RFI does not address Space Shuttle Main Engines (SSMEs). NASA does not plan to include three installed SSMEs with each Orbiter.

NASA is interested in identifying whether potential recipient organizations are capable of bearing the full cost of Space Shuttle Orbiter final display preparation and transportation/ferry

flight. NASA will bear the cost of Orbiter safing which includes decontamination of hypergolic fuel systems and removal of other safety and environmental hazards from the vehicles. Organizations interested in receiving a Space Shuttle Orbiter for public display must be prepared to raise all funding for Space Shuttle Orbiter final display preparation, and transportation/ferry services. Organizations that ultimately receive an Orbiter will be responsible for all display preparation and transportation/ferry flight costs.

NASA will use the results of this RFI to determine interest that may lead to selection of specific organizations to receive a Space Shuttle Orbiter. The Orbiters may be directly transferred or donated to eligible recipient organizations, if any.

Background:

NASA will cease SSP operations at all locations following completion of the last flight, currently scheduled to occur in September, 2010. The Government may elect to change the scheduled date for last flight: that would change the scheduled date an Orbiter is available for transfer to a recipient. SSP retirement necessitates the disposition of all SSP assets and items no longer required by NASA, including the Space Shuttle Orbiters.

The NASA Authorization Act of 2008 (P.L. 110-422) directs NASA to “submit to Congress a plan describing the process for the disposition of the remaining Orbiters and other Space Shuttle program-related hardware after the retirement of the Space Shuttle fleet.” NASA advised the Congress and has had subsequent discussions with the Smithsonian Institution, National Air and Space Museum regarding accession of a flown Space Shuttle Orbiter to the national collection. The National Air and Space Museum houses the national collection of aerospace artifacts. NASA also advised the Congress that the Agency would issue an RFI to gauge the level and scope of interest of U.S. organizations in acquiring the two (2) other Orbiters and other major flight hardware (such as the SSMEs) for public display once NASA’s programmatic requirements for the assets have been satisfied.

SSP Hardware Addressed in this RFI:

Space Shuttle Orbiters

NASA’s Space Shuttle Orbiters (Figure 1) are the first reusable spacecraft capable of routinely launching into orbit like rockets and then returning to Earth as gliders. These unique crew and heavy cargo-carrying vehicles are the main element of the National Space Transportation System that has been the mainstay of the U.S. human spaceflight program for more than a quarter-century. The Space Shuttle Orbiters have and continue to perform a wide variety of scientific research and space operations missions, including the final assembly of the International Space Station.

Due to the significance of the Space Shuttle Orbiters and the role they have played in the Nation’s space program, special attention will be paid to ensuring they will retire to appropriate places. NASA is keenly aware of the essential value of these key assets to the space program’s rich history; the Agency is therefore committed to making placement decisions that are determined to be in the best interest of the American taxpayer.

Under NASA’s current plan, the Orbiter Discovery is to transfer to the National Air and Space Museum. Endeavour or Atlantis will be available for placement no earlier than July, 2011. The other Orbiter will be available before the end of December, 2011, and NASA intends that ferry flights will be completed no later than December, 2011.

NASA estimates the total cost to be incurred by a recipient organization for Orbiter display preparation, and delivery by ferry flight to a U.S. destination airport at approximately \$28.8 million. This includes the cost to air ferry the Orbiter by Shuttle Carrier Aircraft from the Kennedy Space Center to a U. S. destination airport. This estimate is based on updated estimates by NASA about the minimum tasks which must be performed for public display of each Space Shuttle Orbiter. It does not take into account special measures that may be required in specific situations such as transporting the Orbiter long distances over public roadways which may require removal of light posts and traffic signals or transport by barge over water. Additional preparation tasks such as fabrication of engine bay covers or mock nozzles, open payload bay door display configuration, and lighting on the vehicle would also increase costs to recipients. The Orbiters will not be disassembled for transportation or storage.

Special Considerations:

It should be noted that the organizations that ultimately receive a Space Shuttle Orbiter must abide by the International Traffic in Arms Regulations (ITAR) restrictions placed on the items. The Orbiters fall under the purview of the U.S. Munitions List (USML), as defined in the ITAR (22 CFR120-130) and are export controlled. The Space Shuttle Orbiters shall not be transferred to foreign persons (ITAR 120.16), in the U.S. or abroad, or exported out of the U.S., without notification to NASA and the specific approval/export license from the Department of State Directorate for Defense Trade Controls (<http://www.pmdtc.state.gov/>). Violations of these regulations are punishable by fine, imprisonment, or both.

Air ferry of Orbiters by Shuttle Carrier Aircraft would require U. S. destination airports to have 8,000 to 10,000 feet runways depending on the altitude and atmospheric temperature of the landing site, and the final weight of the Orbiters being delivered.

The Space Shuttle Orbiters may not be displayed or stored outdoors. Responders should be aware that the Orbiters will require suitable climate-controlled indoor display or storage space.

Respondents should take into consideration that the Orbiters may contain hazardous materials and require proper handling. Although NASA will take necessary precautions to decontaminate the hardware and remove or render safe known safety and environmental hazards, it may not be possible to completely remove all residual hazards from the hardware. NASA will clearly identify any unusual hazards that are not removed, prior to transferring the Orbiters to final recipient organizations.

There is a limited quantity of support items and tools that may be necessary to transport, assemble, and display the Space Shuttle Orbiters. Loan of support items and tools would be negotiated and coordinated with the recipient organizations, contingent on NASA program requirements.

Responding to this RFI:

Organizations responding to this RFI must be: 1) a U.S. museum, institution, or organization dedicated to education or educational outreach, including NASA Visitor Centers; 2) a U.S. Federal agency, State, Commonwealth, or U.S. possession or any municipal corporation or political subdivision thereof; or 3) the District of Columbia.

Note: At a minimum, if you previously responded to NASA's 2008 RFI Reference # NNH09OI001L, Space Shuttle Orbiter and Space Shuttle Main Engine Placement, please acknowledge your intent and ability to satisfy items 1-4 addressed in the section entitled

“Changes to Orbiter Transfer Cost and Schedule addressed in this RFI”. If you wish to provide updated or new information in response to this RFI, NASA requests that you provide only the updated or new information with appropriate references, if necessary, to your response to the December, 2008 RFI.

RFI responses must include:

- Name of the primary point of contact for the response
- Academic faculty or business title
- Institution or organization affiliation
- Email address
- Phone
- Identification of other key individuals who collaborated on the RFI response
- A brief summary (300 word limit) description of previous relevant experience in displaying assets of National significance.

RFI Questions:

NASA is requesting responses to the following questions:

1. Would your organization be interested in acquiring an Orbiter? For what purpose and at what location?
2. Please explain your organization’s approach to raising funding necessary for Orbiter final display preparation, and ferry/transportation services.
 - a. What are your proposed source(s) of funding?
 - b. What is your ability to raise sufficient funds in time to meet the April 4, 2011 target for funds to be transferred to support display preparation of an Orbiter?
3. The Space Shuttle Orbiters may not be displayed or stored outdoors, and will require suitable climate-controlled indoor display space. Please provide your organization’s capabilities to appropriately house, protect, display, and curate a Space Shuttle Orbiter.
4. Given the updated schedule, financial and curatorial requirements stated in this RFI, what is the earliest date your organization could accept the transfer of an Orbiter?
5. What is the benefit to the Nation of displaying a Space Shuttle Orbiter at your facility? In your response, please identify:
 - a. How you would use these assets to inspire the American public and students in particular;
 - b. Other specific educational or education outreach opportunities; and
 - c. How you would you assess, evaluate, and measure these objectives.
6. Provide the techniques and interpretive strategies that you would use to enhance the display of these artifacts and increase the public’s ability to understand the Nation’s space exploration agenda.
7. What additional assets, tools, or expertise would your organization request from NASA in order to display these assets to the American public?

Topics which organizations should also include the following in an Appendix in as much detail as reasonably possible:

- Mission Statement
- Organizational Chart
- Nature of Governing Authority
- Accreditation or other relevant credential
- Collection Ownership and Management Policy
- Attendance Figures for each of the past 5 years
- Population of geographic area in which organization is located
- Local infrastructure for transporting a Space Shuttle Orbiter, once offloaded from the Shuttle Carrier Aircraft, to the final display location
- Budget and Resources profile including endowments over the past 5 years
- Number of Web Page Hits for each of the past 5 years

Please note that RFI responses including the Appendix must not exceed 25 pages in length. Use single-spaced, 12-point, Times New Roman font.

The following file naming convention should be used: SSP_RFI_firstinitial_lastname2010.doc

For example: Angela Rodriguez would name her file SSP_RFI_A_Rodriguez2010.doc

Authorized file formats include: Adobe Acrobat versions 6 - 8 (.pdf) Microsoft Word (.doc) and Microsoft Excel (.xls)

Although all comments received will be carefully reviewed and considered for inclusion in any possible later action, the initiators of this request make no commitment to include any particular recommendations. Respondents will not be notified of the results of the review.

No solicitation exists; therefore, do not request a copy of the solicitation.

Response Submission Deadline:

Responses to this RFI must be submitted no later than 11:59 PM Eastern Standard Time, on February 19, 2010. RFI submissions will be accepted as email attachments only. All responses must be sent to HQ-SSP_RFI@mail.nasa.gov, with "SSP RFI Response" in the subject line.

An email confirmation of receipt from NASA will be sent within a one-week period to the designated point of contact.

Point of Contact for Inquiries and Submissions:

Inquiries/questions regarding this proposal may be directed to NASA Headquarters, Office of Infrastructure, Mail Stop 4G74, 300 E Street SW, Washington D.C., 20546, fax 202-358-2826, telephone 202-358-0746 (Bob Sherouse), or electronic mail at HQ-SSP_RFI@mail.nasa.gov with "SSP RFI Inquiry" in the subject line. Inquiries/questions must be received by 1 February. NASA responses to inquiries/questions received by this deadline will be available by 9 February and publicly posted at www.nasa.gov/transition/.

DISCLAIMER

NASA will not publicly disclose proprietary information obtained as a result of this RFI. To the full extent that it is protected by law and regulations, information identified by a respondent as Proprietary or Confidential will be kept confidential. This RFI may also be found electronically at www.nasa.gov/transition/.

Approximate Dimensions and Weight

Wing span	78 ft.
Length	122 ft.
Height	56 ft.
Wingtip	12 ft.
Dry Weight	151,000 ft.

Minimum Ground Clearances

Body Flap	12 ft.
Main Gear Door	3 ft.
Nose Gear Door	3 ft.
Wingtip	12 ft.

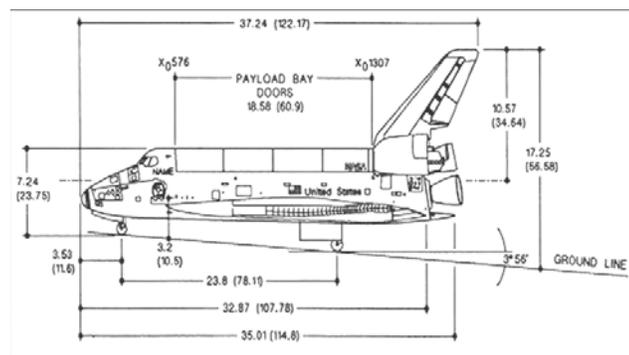
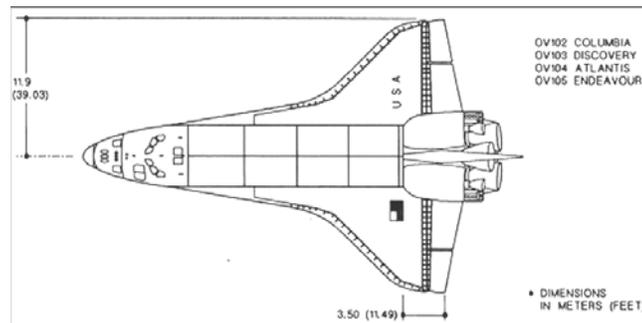


FIGURE 1 – Space Shuttle Orbiter