NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
NASA SHARED SERVICES CENTER

RECOMMENDATION AND DETERMINATION TO SOLICIT FROM ONE SOURCE
OR BRAND NAME

PICK ONE

Sole Source:
☐I recommend that NASA, NASA Shared Services Center negotiate with Vendor Name only for Enter Supply or Service to be procured. The total estimated cost of this effort is Enter Dollar amount and the estimated period of performance or lead-time for delivery is .

OR

Brand Name Justification:
☒I recommend that NASA, NASA Shared Services Center negotiate only with vendors who can provide the subject brand name from RED Digital Cinema, LLC for HSDI Red Camera and Lens Procurement. The total estimated cost of this effort is [redacted] the estimated period of performance or lead-time for delivery is 30 days ARO.

This recommendation is for the acquisition of supplies or services determined to be reasonably available from only one source/only one manufacture. Competition is impractical for the following reasons (please answer the questions below):

1. **What are the reasons for soliciting only the suggested source/suggested brand name?** Please provide the unique characteristics of the items or services along with the supporting rationale and the market research performed to substantiate your reason for the suggested source/brand name.

   NASA requires high-speed digital camera systems with exceptional dynamic range to facilitate the transition from traditional film-based imaging to digital imaging for Artemis III and Artemis IV launch operations. These systems have the potential to be deployed at Launch Pad B and Mobile Launcher-1 (ML-1). The V-Raptor X and V-Raptor XL camera systems have been identified as the only commercially available products capable of meeting NASA's high-speed imagery requirements, including: - Extensive dynamic range to simultaneously capture flame luminosity and shadowed structures without clipping or loss of critical engineering details. - High-speed performance with frame rates comparable to or exceeding those of legacy film cameras used in shuttle and Artemis programs. - Environmental resilience to mechanical, thermal, acoustic, vibration, and EMI/EMC conditions typical at Pad B and ML-1. - Operational compatibility, fitting within existing cabling, interfaces, mounts, power routing, environmental housings, and backend data architecture without the need for re-architecture. - Software and control capabilities supporting necessary control features (including ECC functionality discussed during the prototype phase) aligned with EGS operational readiness.Comprehensive market research conducted by IT and Exploration Ground Systems (EGS) confirmed that no other systems currently demonstrate the required technical capabilities. As a result, the V-Raptor platforms were down-selected as the only viable options. The HSDI project team, along with IT and EGS, evaluated available commercial systems for dynamic range, frame rate, environmental durability, and operational compatibility. Only the V-Raptor X and V-Raptor XL met all mandatory criteria.The selected systems will undergo additional qualification testing to verify their ability to withstand launch-induced environments. They will also be installed in a prototype capacity for Artemis III Wet Dress Rehearsal before final approval as replacements for legacy film cameras. Further competition is not feasible given the specialized technical capabilities required for Artemis mission imaging. Should comparable products become available in the future, NASA will reassess potential alternatives during subsequent procurement cycles.

2. **What is the impact to the government if another vendor/brand is used?** Include any dollar, schedule, or compatibility impacts if possible.

   If a camera system other than the V-Raptor X or V-Raptor XL is procured, it could result in multiple impacts related to costs, scheduling, technical requirements, and system integration. Market research indicated that alternative systems did not meet the necessary specifications for dynamic range or environmental durability. Procuring a non-compliant system would necessitate additional testing, redesign efforts, and configuration adjustments, potentially causing delays in the Artemis-III Wet Dress Rehearsal prototype development aimed at supporting EGS Comm Readiness for ITCO on August 31, 2026, as well as affecting subsequent schedule milestones for the Film-to-Digital Transition: installation at Pad B in early November 2026, HSDI TRR in early December 2026, verification testing in mid to late December 2026, and HSDI SAR in January 2027 to support the Artemis-III mission.Selecting a different brand of camera could also require new cabling, interfaces, mounting solutions, power routing, and environmental housings to be engineered and installed, similar to infrastructure designed specifically for a particular camera system. This would involve additional technician and engineering labor to modify the High-Speed Architecture, leading to unplanned cost increases for the HSDI project.The V-Raptor platform was chosen for the WDR prototyping effort because it conforms to existing architectural constraints at Pad B. Using an alternative system would involve different footprints, connectors, and interface protocols, necessitating hardware, software, and backend re-architecture, as well as new integration testing cycles to ensure safe operation in launch environments. Employing a camera system with insufficient dynamic range or lacking proven environmental resilience could compromise critical high-speed imagery used for engineering analysis. This could lead to a loss or degradation of launch imagery, potentially impairing anomaly detection and resolution efforts. If the alternative cannot be qualified within the required timeframe or fails to meet performance standards, support for Artemis III and Artemis IV imagery could be adversely affected.

ADDITIONAL COMMENTS:

[redacted]

[redacted]

Title