Request for White Paper (RWP)
LGTF Drop Tower Carriage and Variable Weight System Modernization

Response Due Date: No later than 1:00 PM Central Time, on 15 July 2026.

1.0 PURPOSE

The Government is seeking White Papers from interested parties with the engineering and manufacturing capability to execute the complete redesign, fabrication, and installation of a new carriage and variable weight system for the Landing Gear Test Facility (LGTF) Drop Towers 2, 3, and 4 located on Wright-Patterson Air Force Base (AFB) in Ohio.

The primary goal of this Request for White Paper (RWP) is to identify potential solutions and innovative industrial approaches to meet the technical objectives detailed in the attached Statement of Objectives (SOO), Attachment 1. The focus of the white paper should be on a comprehensive, turnkey approach that ensures the successful integration, safe operation, and long-term sustainment of the final system. The Government will use the submitted White Papers to assess industry capabilities, refine project requirements, and select vendors for a potential future Request for Project Proposal (RPP).

2.0 BACKGROUND

The carriage and variable weight systems on LGTF Drop Towers 2, 3, and 4 require modernization following the demolition of the previous lead-based systems. This project will provide a modern, safe, and precise solution for variable-weight landing gear drop testing. The new system must leverage the existing drop tower structures, guide rails, and control systems, ensuring the continued operational capability of this critical national asset.

3.0 PROJECT OBJECTIVES & DEFINITION OF SUCCESS

Definition of Prototype Success: Operational Utility
Operational utility, within the Department of War, refers to the degree to which a system, weapon, technology, capability, or process contributes to the successful completion of military missions and objectives within the operational environment. It encompasses mission effectiveness, integration, logistics, cost effectiveness, and adaptability.

A successful prototype project will be one that delivers a fully operational, integrated, and sustainable system. Submissions should address how the proposed solution will meet the following criteria, which define project success:

1. Full Integration: The proposed solution must be fully compatible with the existing structural, mechanical, and release mechanisms of LGTF Drop Towers 2, 3, and 4.

- Comprehensive Design: The project must yield a complete system design package, including a final Process and Instrumentation Diagram (P&ID), a functional digital model, and documented proof of integration with the existing tower infrastructure without modification.

- Seamless Control: The final system shall be fully controllable and monitored from the existing LGTF control room and seamlessly interface with the government's existing Data Acquisition (DAQ) architecture. Proposers should outline their plan to develop an Interface Control Document (ICD).

2. Performance & Safety: The system must meet all specified performance requirements safely and reliably.

    - Performance Validation: The system must be verified through a government-witnessed Site Acceptance Test (SAT) to meet the weight range and increment requirements for each tower as specified in SOO Section 3.

    - Safety Compliance: The design, fabrication, and installation must demonstrably adhere to all relevant safety standards, including OSHA, ANSI, and applicable MIL-STDs for machinery and lifting devices.

3. Logistics & Supportability: The project must generate the data and documentation necessary for long-term government sustainment.

    - Technical Data Package: A complete As-Built Technical Data Package (TDP) must be delivered, containing all engineering drawings, material specifications, design calculations, and Operation & Maintenance (O&M) manuals.

    - Life-Cycle Viability: The proposal should include an analysis of estimated maintenance requirements and a recommended spare parts list to ensure maximum system availability.

4.0 TECHNICAL OBJECTIVES

The core technical objective is to design, fabricate, install, and verify a complete, turnkey carriage and variable weight system that meets the performance specifications outlined in the SOO (Attachment 1).

NOTE: The SOO is marked Controlled Unclassified Information (CUI) and Distribution D, Export Controlled; therefore, a CMMC Level 2 (self-assessment) must be current in the Supplier Performance Risk System (SPRS). Additionally, the company must have an active certification in the Joint Certification Program (JCP). For the Agreements Officer to confirm compliance with both SPRS and the JCP, send an email with the company CAGE code to

the Agreements Officer at brooke.vandeman@us.af.mil. Upon confirmation of compliance, the SOO will be released electronically to the company.

5.0 WHITE PAPER SUBMISSION REQUIREMENTS

Respondents shall submit a White Paper limited to 20 pages. The response should include the following sections:

- 5.1. Company Information: Company Name, Address, Website, Point of Contact (POC), CAGE Code, and SAM UEI.

- 5.2. Technical Approach:
    - Describe your conceptual design for the carriage and variable weight system.
    - Detail your plan for ensuring compatibility with the existing tower structure, guide rails, and hoist systems.

    - Outline your methodology for integrating with the government's control room and DAQ architecture.

- 5.3. Integration, Logistics, and Data Rights:
    - Describe your approach to developing the final system design package, TDPs, and O&M Manuals.
    - Confirm your understanding and ability to provide all necessary As-Built drawings and technical data to the Government for long-term sustainment.

- 5.4. Risk & Safety:
    - Provide an initial assessment of the most significant technical and integration risks.
    - Outline your approach to ensuring compliance with all relevant OSHA, ANSI, and MIL-STD standards.

- 5.5. Corporate Experience:
    - Provide a summary of your company's experience in designing, manufacturing, and sustaining complex, heavy-load mechanical systems, particularly for test and evaluation environments.

- 5.6. Schedule: A notional schedule with major milestones for design, long-lead procurement, fabrication, installation, and final system verification, predicated on a FY26 award.

- 5.7. Cost Estimate: A Rough Order of Magnitude (ROM) cost estimate for the entire turnkey project.

- 5.8. Questions and Feedback: Provide any assumptions used in the response and requests for any missing information needed to refine the concept.

- 5.9. Compliance with 10 U.S.C. § 4022: Provide rationale and supporting documentation justifying how the company will satisfy **at least one** of the conditions for award under this authority. To satisfy 10 U.S.C. 4022(d)(1)(A)-(C) – Appropriate Use of Authority, elaborate on one of the following:

  (A) There is at least one nontraditional defense contractor or nonprofit research institution participating to a significant extent in the prototype project.

  (B) All significant participants in the transaction other than the Federal Government are small businesses (including small businesses participating in a program described under section 9 of the Small Business Act (15 U.S.C. 638)) or nontraditional defense contractors.

  (C) At least one third of the total cost of the prototype project is to be paid out of funds provided by sources other than the Federal Government.

  NOTE 1: Non-Traditional Defense Contractor (NDC) = An entity that is not currently performing and has not performed, for at least the one-year period preceding the solicitation of sources by DoD for the procurement or transaction, any contract or subcontract for the DoD that is subject to full coverage under the cost accounting standards (CAS) prescribed pursuant to section 1502 of title 41 and the regulations implementing such section (see 10 U.S.C. §3014). A nontraditional defense contractor is considered a nontraditional defense contractor for the duration of the prototype project/agreement's period of performance, or for any in-scope work modified under the same agreement.

  NOTE 2: Non-profit research institution is validated by reviewing the vendor's 501(c)(3) tax-exempt status, which is required by the Internal Revenue Service.

  NOTE 3: "Significant extent" and "significant participants" may be defined by the vendor providing rationale to one or more of the following variables:

  a. Has a significant role / level of involvement in the development, production, or delivery of a product or service.

  b. Has a significant impact on the design, development, or production of the product or service.

c. Has significant level of material interest in the success of the product or service.

d. Has significant level of company's financial interest in the success of the product or service.

e. Has Significant level of control over the development, production, or delivery of the product or service.

f. Other significant rationale provided by the vendor.

6.0 EVALUATION CRITERIA

White papers will be evaluated based on the clarity and feasibility of the proposed technical approach, the respondent's understanding of the project objectives, demonstrated corporate experience, and the credibility of the path forward to delivering a fully integrated and sustainable system. The Government may invite select respondents to present their concepts in more detail.

7.0 ADMINISTRATIVE INFORMATION

- Submissions: Responses shall be submitted in .pdf format via email to the Agreements Officer, Brooke Vandeman, at brooke.vandeman@us.af.mil.

- Proprietary Information: Proprietary information is not encouraged but, if included, MUST BE CLEARLY MARKED on each page.

Disclaimer: This RWP is for market research and planning purposes only and does not constitute an RFP or a commitment by the Government to award a contract or agreement. The Government will not reimburse any costs associated with the preparation of this white paper.

Attachments:
*1. Statement of Objectives (SOO)

**Must be requested via email from Agreements Officer, as outlined in Section 4.0 of this document.*