

**ATTACHMENT J-I**  
**Statement of Work**  
**For**  
**Marshall Space Flight Center Specialized Engineering Support**  
**For Avionics and Flight Software Development**

**1.0 Scope**

The Contractor shall provide engineering support to the Marshall Space Flight Center (MSFC) Engineering Directorate including but not limited to the requirements development, design, analysis and test of the space transportation vehicle elements and subsystems including the avionics and flight software development. This includes supporting the development of a systems integration laboratory and the subsequent analysis and test performed in the laboratory.

**A. Task Order Management and Reporting**

**A. Contractor Management**

The Contractor shall provide the planning, coordination, technical direction, and surveillance of the activities necessary to assure disciplined performance of work and timely application of resources for the accomplishment of all tasks issued under the order. The Contractor shall be responsible for maintaining communication with each supported organization and alerting the Contracting Specialist immediately of any problems that would prevent meeting established milestones.

**B. Data Deliverables**

The Contractor shall report and document this work and fulfill the requirements of associated Data Requirement Descriptions (DRD's) as outlined in Data Procurement Document (DPD) 1387 (Attachment J-2). The Contractor shall determine the data restriction that applies to each data deliverable and mark or transmit the data restriction in accordance with section 2.3.3 of the Data Procurement Document.

1. The Contractor shall submit a Monthly Status Report in accordance with DRD 1387MA-003. Any presentation, reports, analyses or technical memorandum that is developed during the execution of this task order shall be pre-coordinated with the Contracting Officer's Technical Representative (COTR) or Task Order Technical Monitor and final copies provided to the COTR or Task Order Technical Monitor.

The Contractor shall provide NASA with necessary information on project progress to allow the Government to monitor product assurance, identify significant problems, and implement corrective action as applicable based on the Contractor's performance.

The Contractor shall develop and maintain a Work Breakdown Structure (WBS) defining all task elements contained in this Task Order and in accordance with established GSA rates per hours worked.

2. The Contractor shall submit an On-Site Employee Location Listing in accordance with DRD 1387CD-001.
3. The Contractor shall submit a Contractor Employee Clearance Document in accordance with DRD 1387MA-001.

4. The Contractor shall submit a Position Risk Designation for Non-NASA Employee in accordance with DRD 1387MA-002.
5. The Contractor shall establish and implement an industrial safety, occupational health, and environmental program that (1) prevent employee fatalities, (2) reduce the number of incidents, (3) reduce the severity of employee injuries and illnesses, and (4) protects the environment through the ongoing planning, implementation, integration and management control of these programs. The contractor shall comply with all MSFC SHE Core Program Requirements in MPR 8715.1, "Marshall Safety, Health and Environmental (SHE) Program" while working on-site at MSFC and provide a signed Alternate Safety, Health, and Environmental (SHE) Plan in accordance with DRD 1387SA-001.
6. The Contractor shall report mishaps and safety statistics to the MSFC Industrial Safety Branch in accordance with DRD 1387SA-002. The Contractor shall submit directly into the NASA Incident Reporting Information System (IRIS) or shall use the forms listed in section 15.4 of DRD 1387SA-002 or electronic equivalent to report mishaps and related information required to produce the safety metrics.

## **B. Technical Requirements**

The Contractor shall be responsible for information and information technology (IT) security when physical or electronic access to NASA's computer systems, networks, or IT infrastructure is required or when NASA information is stored, processed, generated or exchanged with NASA or on behalf of NASA, regardless of where the information resides.

All data files and reports electronically delivered shall comply with Technical Standard 1194.21 of the Rehabilitation Act of 1973, Section 508.

Tasks shall be defined as follows:

### **3.1 Systems Integration Laboratory (SIL) Technical Support**

The Contractor shall support the planning, design, development, implementation, verification, and operation of the Marshall Space Flight Center (MSFC) System Integration Laboratory (SIL). The Contractor support shall include but is not limited to: systems engineering and integration support such as SIL requirements development and traceability analyses; SIL development plans including development of system architectures and facility planning; SIL model development, verification, and integration; real-time hardware and software interface development and support; distributing SIL interface development to support communications with other test facilities; support of visualization software to display simulation results; formal test procedure development and conduct; design and development of lab automation; design and development of data archiving; implementing a data distribution architecture; design and development of user displays; electrical and mechanical integration; and SIL documentation and configuration management support.

#### **Deliverables:**

- SIL Model Development support documentation for models and simulations developed.
- Design and development documentation for lab automation, data archiving, and user displays.

#### **4.0 Travel**

The Contractor shall travel as requested to accomplish each technical requirement. Any travel must be approved by the COTR or Task Order Technical Monitor, prior to travel.

The Contractor's monthly report shall contain travel detail to include travel destination, dates of travel, number of people who traveled, and purpose of the travel.

#### **5.0 Materials**

No materials are currently required for this order. However, this may change based on the customer's requirements as directed by the COTR or Task Order Technical Monitor. Any materials being purchased must be approved by the Contracting Officer (CO) prior to purchase.

#### **6.0 Personnel Skill Levels**

The Contractor shall provide skills at a level to perform the subtasks in this order.

#### **7.0 Technical Milestones and Deliverables**

Specified under Section 2.B of the SOW; any additional deliverables for specific subtasks are specified under Section 3.0.