

## Task Order Statement of Work (SOW)

Date: 8/19/2020

Task Name: RST Payload and Wide Field Instrument Systems Engineering Support

Task No. / Mod: 107 / 5

Task Monitor (TM): John Chambers

Contract number: NNG15CR66C

Contract SOW Reference: FUNCTION 4- SUPPORT SERVICES

### I. Scope

- a. Background – The primary objective of this task is to provide systems engineering support to the WFIRST project for the payload and GRISM/PRISM portion of the wide field instrument
- b. Summary of work –
  - Support the design, development, I&T, and data reduction for the development of the WFIRST Payload and WFI Instrument
  - Support engineering team meetings and technical interchange meetings and teleconferences.
  - Provide technical evaluation, and assessment of all technical aspects of the Payload and Wide-Field Instrument pertaining to its design for to the WFIRST mission.
- c. Required skills/knowledge –
  - Systems Engineering Design and Analysis
  - General metrology support (Laser Tracker, Theodolite Support)
  - System Architecture and Optimization experience
  - Ability to create, analyze, and compare complex models
  - Ability to understand the performance impacts of design changes across the elements
  - Ability to understand and optimize for manufacturability, ground alignment, on-orbit optimization, and overall performance

II. Period of Performance

2/5/2019 – 4/14/2021

III. Subtask Description

<b><u>Subtask</u></b>	<b><u>LOE</u></b>
1 – Payload Systems Engineering	.70
2 – WFI GRISM Systems Engineering	0.00
3 – WFI PRISM Systems Engineering	1.00
4 – WFI Stimulus Engineering	0.75
<b>Total</b>	<b>2.45</b>

IV. Deliverables/Schedules/Milestones

At a minimum, the contractor shall deliver the items specified below:

<i>Ref#</i>	<i>Deliverables</i>	<i>Due Date</i>
1	Status Reports	Weekly/Bi-weekly
2	Performance Reports	Monthly
3	End-of-task Report	End of task

V. Management Approach

a. Staff Allocation, Expertise, and Skill Mix

The contractor shall staff this work item with the appropriate skill mix and staffing level for the work.

b. Configuration Management

Systems and documents will be covered under the Project Configuration Management Plan.

c. Facilities

Appropriate IT devices to support the analyses, specification development, and report development are required. It shall be the contractor's responsibility to provide and set up local workstations and network connections at the contractor's off-site facilities as required, and to install any required tools and utilities on the contractor's equipment.

d. Risk Management and Best Practices

The contractor shall manage schedule, cost, and technical risk through monitoring and reporting of progress and performance metrics, identifying issues well in advance of negative consequences, recommending corrective action to the TM, and implementing corrective actions with the compliance of the TM.

e. Performance Metrics

The work performed for this task will be evaluated by the TM based on the technical merit. Technical evaluation of the task performance is a subjective combination of performance metrics, technical quality of deliverables, cost control, significant events, innovations and meeting requirements set forth in the SOW.

NOTE: Each Task Order should have specific performance metrics and should be detailed in the SOW. Examples of performance metrics could be:

1. Actual Milestone Progress vs Planned/Scheduled
2. Actual vs Planned Costs
3. Quality of Technical Performance
4. Contractor Communication
5. Personnel Management

f. Government Furnished Facilities, Equipment, Software and Other Resources

The Government will provide account and passwords to government-furnished workstations where existing versions of various relevant software packages shall be maintained. It shall be the contractor's responsibility to complete any GSFC required security-related training courses.

g. Quality Assurance Requirements

The contractor providing technical services shall comply with all CMMI Level 2 processes established for the Project and deliverable products. Applicable requirements include, but not limited to:

1. NPR 7120.5E NASA Space Flight Program and Project Management Requirements
2. NPR 7123.B NASA Systems Engineering Processes and Requirements
3. GPR 7120.99 Goddard Project Management
4. GPR 7120.5A Goddard Systems Engineering
5. GPR 7150.4 Goddard Software Engineering Requirements

#### VI. ODC (Travel and Procurement)

Bi-monthly travel to Boulder, CO for technical interface meetings (1 traveler, 4 day trips)

#### VII. Work Location

This work shall be performed primarily at the Goddard Space Flight Center (On-site), but the contractor may be required to perform some work at the contractor's facility (Off-site).

#### VIII. Reporting Requirements

##### a. Weekly or Bi-weekly status report

The contractor shall generate Performance Reports every week or bi-weekly. The report shall include, as a minimum, a summary of the weeks highlights/accomplishments, milestones/schedule/deliverables, risks and customer meetings.

##### b. Monthly performance report

The contractor shall provide monthly technical and schedule progress reporting to adequately describe the activities of the contractor team to the TM. The contractor shall provide monthly cost reporting in accordance with the WBS. The contractor, including subcontractors, shall be available to attend monthly status meetings.

The contractor shall report status in person or via teleconference to the TM or designated alternates on a monthly basis. Reports shall include informal presentation of interim results, status of development activities, and action item status. The contractor shall provide all reports at least one day in advance of the monthly meeting via email, and maintain an email distribution list with the concurrence of the TM. The contractor

shall also support the TM in the preparation of status reviews for internal and external funding agencies. The contractor shall comply with any and all additional requests for status meetings and reports.

IX. Security Requirements

The contractor shall comply with Information Technology Security procedures and requirements as defined by NPG 2810.1A in the performance of this task. In addition, the contractor shall comply with all applicable federal rules and regulations and agency directives.

X. Data Rights

This SOW shall adhere to all Data Rights Clauses as stated in the SES II contract.

XI. Applicable Documents

In the performance of this task, the contractor shall comply with the following documents:

1. NPR 7150.B NASA Software Engineering Requirements
2. GPR 7150.1 Goddard Software Engineering Requirements

XII. References