**SMALL BUSINESS INNOVATION RESEARCH**

**phase ii statement of objectives**

**for**

**Minature Aiming Ranging Laser**

**SOCOM22.1-D003 (Revision 1)**

**7 January 2021**

**I. INTERNATIONAL TRAFFIC AND ARMS REGULATION:** The technology within this topic is restricted under the International Traffic in Arms Regulation (ITAR), which controls the export and import of defense-related material and services. Offerors must disclose any proposed use of foreign nationals, their country of origin, and what tasks each would accomplish in the statement of work in accordance with section 5.4.c.(8) of the solicitation. Additionally, Offerors will describe compliance mechanisms offerors have in place or will put in place to address any ITAR issues that arise during the course of agreement administration.

**II. BACKGROUND**:

The Miniature Aiming Ranging Laser (MARL) increases the Advanced Target Pointer/Illuminator Aiming Laser (ATPIAL/SAL) capability by adding a range finder function for the Assault Rifle or Designated Marksman Rifle (DMR) and Light Machine Gun (LMG) for 0-900 meter system accuracy. Weapons mounted range finders are commercially available for interim capability but require further development and integration with visual augmentation systems (VAS) to achieve MAS-L objectives.

**III.** **OVERALL OBJECTIVE:**

The objective of this Statement of Objectives (SOO) is to develop applied research toward an innovative capability to allow operators to illuminate and detect, and range human targets from 0-900 meters and beyond when using the PVS-31 or PVS-31A Binocular Night Vision Device (BNVD).

**IV.** **REQUIREMENTS:**

1. **General:** The contractor shall demonstrate and deliver twelve (12) prototype Minature Aiming Ranging Laser (MARL) units that will allow operators to illuminate, and detect human targets from 0-900 meters, vehicle targets from 0-3,000 meters and beyond when using the PVS-31 or PVS-31A Binocular Night Vision Device (BNVD). The intent of this laser is to increase the ATPIAL/SAL capability by adding a range finder function for the AR or Designated Marksman Rifle (DMR) and Light Machine Gun (LMG). This capability shall meet the requirements in the description below.
   1. **Detailed Requirements:** The Contractor shall design, develop, fabricate, test, demonstrate, and deliver the twelve (12) prototype MARL units that meet the following performance requirements.
      1. Shall be less than or equal to 16 cubic inches.
      2. Shall weigh no more than 10 ounces.
      3. Shall include a visible aiming/pointing laser in the 610-670 nm wavelength.
      4. Shall include a Near Infrared aiming/pointing laser in the 820-900 nm wavelength.
      5. Shall include a laser range finder in the 1400-1700 nm wavelength.
      6. Shall be interoperable with a MIL-STD-1913 rail interface.
      7. Shall have a visible laser power output that allows for the operator to view the laser point at 25m (low power), 100m (high power).
      8. Shall have a NIR Pointer power output that allows for the operator to view the laser point at 100m (low power), 900m (high power).
      9. Shall have a Laser Range Finder with sufficient power output to range a man size target at 900 meters.
      10. Shall have an adjustable NIR Illumination Field of less than or equal to 1 to greater than or equal to 6 degrees
      11. Shall have NIR Illumination with high and low settings for the power output. The high NIR illuminator power output shall be sufficient enough to enable the operator to illuminate an approximately 3° field of targets at 900m.
      12. Shall not deviate from its zeroed position by more than 0.5 mrad when subjected to 1000 round intervals of weapon shock.
      13. Shall not deviate from its zeroed position by more than 0.25 mrad after being detached from, and reattached to, a MIL-STD-1913 rail a minimum of five times.
      14. Water proof to at least 66 feet depth for 2 hours.
      15. Shall have an adjustable brightness illuminated display for day and night.
      16. Shall utilize the Applied Ballistics (AB) calculator. Shall seamlessly utilize integrated environmental sensors as inputs to the ballistic calculation.
      17. Shall have an integrated Bluetooth capability that allows the MARL to send and receive data from an enabled AB device, ie. hand held anemometer with ballistic processor.
      18. Shall provide one remote with a 90 degree connector, 20-22 inches in length, and shall mimic the functions of the MARL.
      19. Survive all SOCOM SOF environments and be tested per MIL-STD-810H.
      20. MARL should be capable of sending information to an external display in accordance with Interface Control Document (ICD) for Weapon Mounted Ballistic Calculators and Micro-Displays Revision D.
      21. Meet a maximum Technology Readiness Level 7 defined as: System prototype demonstration in an operational environment. Prototype near or at planned operational system. Represents a major step up from TRL 6 by requiring demonstration of an actual system prototype in an operational environment (e.g., in an air-craft, in a vehicle, or in space).”

Note: References to the above Military Standards can be accessed in the public domain.

* 1. **Component Requirements:** N/A
  2. **Unique Item Identification:** The contractor shall include the DoD unique item identifications or a DoD recognized unique identification equivalent for the prototypes delivered. This includes a description and cost breakout as applicable. Information on unique item identifier types is at <http://www.acq.osd.mil/dpap/UID/uid_types.html>. The guide is at <http://www.acq.osd.mil/dpap/UID/guides.htm>. This is in accordance with DFARS 252.211-7003.
  3. **Ship to Address:** The Contractor shall deliver all prototypes systems delivered under this contract to the following address:

Naval Surface Warfare Center Crane Division (DoDAAC: N00164)

Audrey Robinson/Patsy Fleetwood

Bldg 3291, Code JXQR

300 HWY 361

CRANE, IN 47522-5001

(812) 854-4399/(812) 296-2150

* 1. **Shipping Costs:** The Contractor shall pay all the costs to ship all product deliverables to and from the validation testing/demonstration sites and to the final delivery location.

1. **Document Deliverables:** The Contractor shall provide the following documents to the respective specified addresses during the Phase II Period of Performance:
2. Kick-Off/System Requirements Review: See CDRL A001.
3. Monthly Progress Reports: See CDRL A002.
4. Developmental Test Plan for Performance Validation: See CDRL A003.
5. Developmental Test Report for Performance Validation: See CDRL A004.
6. Business Plans: See CDRL A005.
7. Final Technical Report: See CDRL A006.
8. Preliminary Design Review – Design Review Information Package: See CDRL A007.
9. Critical Design Review - Design Review Information Package: See CDRL A008.

**V. TESTS AND DEMONSTRATIONS:** The Contractor shall conduct tests and demonstrations to validate that the MARL meets or exceeds all the requirements specified in this Statement of Objectives. (See CDRL A003 and CDRL A004).

1. The Contractor shall demonstrate that the MARL meets or exceeds the performance of the detailed requirements above. (See CDRL A003 and CDRL A004).

**VI.** **ENVIRONMENTAL AND SAFETY:** N/A.

**VII. GOVERNMENT FURNISHED PROPERTY (GFP)/GOVERNMENT FURNISHED PROPERTY (GFE)/GOVERNMENT FURNISHED INFORMATION (GFI):** The Government does not intend to provide the Contractor any GFP, GFE or GFI. However, the Contractor shall specify by stock number and nomenclature any GFP/GFE/GFI the Contractor believes is needed to successfully complete the requirements specified in this Statement of Objectives.

**VIII.** **Period of Performance:** The maximum Period of Performance for this Phase II effort is twelve (12) months. The Contractor can propose a lessor Period of Performance if a lessor Period of Performance does not jeopardize the Contractor’s successful completion of the requirements specified in this Statement of Objectives.

**IX. MEETINGS AND REVIEWS**: The Contractor shall attend the following meetings and reviews.

A. Phase II Kick-Off meeting shall be conducted either in Tampa, Florida or virtually not later than thirty (30) calendar days after contract award. The Contractor shall provide the Government:

1. A Phase II Kick-Off Meeting Read-Ahead no less than seven (7) calendar days prior to the Phase II Kick-Off Meeting / System Requirements Review Meeting (See CDRL A001).

2. An initial Program Management Plan for accomplishing all objectives specified in this Statement of Objectives. (See CDRLs A002).

3. Conceptual Design Drawings no less than ten (10) calendar days prior to the Phase II Kick-Off/System Requirements Review Meeting (See CDRL A001).

B. Preliminary Design Review (PDR) - This meeting shall be conducted at the Contractor’s facility no more than ninety (90) calendar days after Phase II contract award. The Contractor shall provide teleconference capability for those participants unable to travel. The Contractor shall provide the Government:

1. A Preliminary Design Review and Materials Read-Ahead Briefing no less than ten (10) calendar days prior to the PDR (See CDRL A007).

2. A Detailed Design Report (See CDRL A007).

3. Trade off considerations for the design. (See CDRL A007).

4. Results of any testing to date. (See CDRL A004).

5. Resolution to any Contractor/Government issues or concerns.

6. An assessment of other potential benefits/impacts of the prototypes, including weight savings, cost reduction, prolonged system life, and a recommendation of any changes for consideration/incorporation into the subsequent design that will be provided to the Government at the follow-on Critical Design Review. (See CDRL A007).

C. Critical Design Review (CDR): This teleconference meeting shall be arranged by the Contractor two (2) weeks prior to the end of the contract completion date. The Contractor shall provide the Government:

1. A Critical Design Review and Materials Read-Ahead Briefing no less than ten (10) calendar days prior to the CDR (See CDRL A008).

2. A Detailed Design Report (See CDRL A008).

3. Trade off considerations for the design. (See CDRL A008).

4. Results of any testing to date. (See CDRL A004).

5. Resolution to any Contractor/Government issues or concerns.

D. Phase II Close-Out Meeting: The Phase II Close-Out Meeting shall be conducted in Tampa, Florida or virtually no earlier than seven (7) calendar days prior to the conclusion of the Phase II Period of Performance. The Contractor shall provide the Government:

1. A briefing on the test verification (See CDRL A004).

2. An update of the progress to date. (See CDRL A002)

3. Resolution to any Contractor/Government issues or concerns.

**X. NOTIFICATION:** The Contractor shall notify USSOCOM no less than thirty (30) calendar days prior to tests, demonstrations and reviews at the Contractor’s facilities to ensure USSOCOM representatives can attend should they desire to do so.

**XI. TRAVEL REQUIREMENTS:** If the PDR and CDR are not conducted virtually and travel is required, the Contractor shall comply with the Federal Acquisition Regulation 31.205-46 (<http://www.gsa.gov/perdiem>) on proposing all travel related costs. If required, the Contractor shall include the costs associated with the following travel requirements in the proposal:

1. Phase II Kick-Off Meeting: Tampa, Florida; one (1) overnight, no more than three (3) Contractor representatives.
2. Phase II Close-Out Meeting: Tampa, Florida; one (1) overnight, no more than three (3) Contractor representatives.

**XII. DISCLOSURE OF UNCLASSIFIED INFORMATION:**

A. On September 21, 2001, the Department of Defense designated Headquarters US Special Operations Command (USSOCOM) a sensitive unit, as defined by Title 10 United States Code (USC) Section 552 (10 USC 552). In keeping with this designation, unclassified information related to USSOCOM military technology acquisitions managed by USSOCOM or any of its component commands, will be designated Controlled Unclassified Information (CUI). As such, the contractor hereby unequivocally agrees that it shall not release to anyone outside the Contractor’s organization any unclassified information, regardless of medium (e.g., film, tape, document, Contractor’s external website, newspaper, magazine, journal, corporate annual report, etc.), pertaining to any part of this contract or any program related to this contract, unless the Contracting Officer has given prior written approval. Furthermore, any release of information which associates USSOCOM, Special Operation Forces (SOF), or any component command with an acquisition program, contractor, or this contract is prohibited unless specifically authorized by USSOCOM.

B. Requests for approval shall identify the specific information to be released, the medium to be used, and the purpose for the release. The Contractor shall submit its request to the Contracting Officer at least 45 days before the proposed date for release for approval. No release of any restricted information shall be made without specific written authorization by the Contracting Officer.

C. The Contractor shall include a similar requirement in each subcontract under this contract. Subcontractors shall submit requests for authorization to release through the prime contractor to the Contracting Officer.

D. The Contractor further understands that Title 18 USC Section 701 specifically prohibits the use of the USSOCOM emblem or logo in any medium (e.g., corporate website, marketing brochure, newspaper, magazine, etc.) unless authorized in writing by USSOCOM. Forward any requests to use the USSOCOM emblem or logo through the Contracting Officer.