**SMALL BUSINESS INNOVATION RESEARCH**

**phase ii statement of objectives**

**for**

**Ultra-Compact LONG-RANGE MACHINE-GUN Optic**

**SOCOM22.1-D002**

**13 OCTOBER 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**:

With the advent of highly accurate and long range lightweight medium machine guns (LWMMG) weapon systems as well as the existing family of machine guns, a direct view sighting system is required to allow the operator to detect and engage targets at the effective range of those weapons. Existing direct view Machine Gun Optic (MGOs), while compact, provide limited overmatch as they do not have adequate magnification to detect and engage targets at the standoff distances of all enemy weapons. Due to the limited mounting space, a very specific and ultra-compact direct view Machine Gun Optic is required that is very short to properly mount and interface with these LWMMG weapons.

III. **OVERALL OBJECTIVE:**

The objective of this Statement of Objectives (SOO) is to develop applied research toward an innovative capability to allow operators to detect and engage targets for 0-2000 meters and beyond in day-night mounted and dismounted machine gun engagements.

IV. **REQUIREMENTS:**

1. **General:** The contractor shall demonstrate and deliver twelve (12) prototype Ultra-Compact Long-Range Machine-Gun Optic (UCLR-MGO) units that will allow operators to detect and engage targets for 0-2000 meters and beyond in day-night mounted and dismounted machine gun engagements. The intent of this optic is to provide a compact direct view optic to the operator that will not interfere with the operation of the machinegun, which includes opening the feed tray covers for immediate and remedial corrective actions. 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 UCLR-MGO units the meet the following performance requirements.
      1. Ultra-compact first focal plane (FFP) direct view optic (DVO) that provides at least a 10x optically magnified image as well a continuous magnified image down through and to a 1x magnified image in less than ¾ of a revolution/rotation.
      2. Shall be less than 8.5 inches in length.
      3. Shall weigh no more than 20 ounces.
      4. Shall attach to a MIL-STD-1913 rail, by clamping on four 45 degree surfaces.
      5. Shall be clamped in place by ½ inch bolt and nut that is tightened by wrench.
      6. Shall include a reticle with an illuminated aim-point and milliradian markings. The illuminated aiming point shall be visible during daylight conditions with a graduated reticle.
      7. Shall have audible and tactile Windage and Elevation adjustments that are repeatable and able to be zeroed.
      8. The MGO shall interoperate with Special Operations Command (SOCOM) Special Operations Forces (SOF) medium and heavy machine guns and should interoperate with current SOCOM laser range finders (LRF) and clip-on multiband sensors.
      9. The MGO target detection range shall be 0-2000 meters (m) and as a goal the MGO target recognition range should be 500m beyond the effective range of the weapon.
      10. Shall be coin cell battery powered.
      11. The MGO shall not have a laser and shall not present a safety risk to the operator.
      12. Shall be water proof to at least 1m depth for 2 hours.
      13. Shall survive all SOCOM SOF environments and be tested per MIL-STD-810H.
      14. Maximum Technical Readiness Level (TRL) of TRL 7. (System prototype demonstration in an operational environment: Prototype near, or at, planned operational system. Represents a major step up from TRL 6, requiring the demonstration of an actual system prototype in an operational environment such as an aircraft, vehicle, or space.)
   2. **Component Requirements:** N/A
   3. **Unique Item Identification:** The contractor shall include the Department of Defense (DoD) unique item identifications (UID) 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.
   4. **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/David Curry

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 per the respective contract data requirements list (CDRL):
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.
10. Financial Status Report: See CDRL A009.
11. Contractor Acquired Property: See CDRL A010.

**V. TESTS AND DEMONSTRATIONS:** The Contractor shall conduct tests and demonstrations to validate that the UCLR-MGO 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 UCLR-MGO meets or exceeds the performance of the detailed requirements above. (See CDRL A003 and CDRL A004).

VI. **ENVIRONMENTAL AND SAFETY:**

<http://everyspec.com/MIL-STD/MIL-STD-1800-1999/MIL-STD-1913_17705/>

<http://everyspec.com/MIL-STD/MIL-STD-0800-0899/MIL-STD-810H_55998/>

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 at the contractor’s facility 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 by teleconference no more than ninety (90) calendar days after Phase II contract award. The Contractor shall provide teleconference capability for those participants. 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 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 System Testing: Crane, Indiana; up to two (2) three-day overnight trips, 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.