



UNITED STATES MARINE CORPS
MARINE CORPS SYSTEMS COMMAND
2200 LESTER STREET
QUANTICO, VIRGINIA 22134-5010

IN REPLY REFER TO:
5720
MCSC2013F040098
9 May 13

David, Brody & Dondershine, LLP
Mr. Thomas David
12355 Sunrise Valley Drive
Reston VA 20191

SUBJECT: FOIA MCSC2013F040098

Dear Mr. David:

This responds to your Freedom of Information Act (FOIA) request of November 6, 2012, which requests a copy of contract M67854-13-C-6017.

Please find enclosed a copy of the previously released documents.

Pursuant to Executive Order 12,600 request, the submitter provided the Marine Corps Systems Command with proposed redactions pursuant to 5 U.S.C. § 552 (b)(3) and 5 U.S.C. § 552 (b)(4).

The submitter asserts that attachments 3 and 4 are exempt from disclosure in their entirety pursuant to FOIA Exemptions 5 U.S.C. § 552(b)(3) and 5 U.S.C. § 552(b)(4). Specifically, 5 U.S.C. § 552(b)(3) precludes disclosure of a submitter's information if disclosure is prohibited by another statute. It is important to note that the Competition In Contracting Act of 1984 (CICA) and 10 U.S.C. § 2305(g), preclude the release of proposals. In fact, CICA provides that "a proposal in the possession or control of [a military department] may not be made available to any person under section 552 of title 5." Id.

Additionally, the Trade Secrets Act, 18 U.S.C.A. § 1905 (West Supp. 1999) ("TSA"), also precludes release of the requested proposals. Under this statute, officers and employees of the United States or any U.S. agency or department, are prohibited from divulging or disclosing information that relates to trade secrets, operations, style of work, confidential data, amount or source of income, profits, or expenditures.

FOIA Exemption 5 U.S.C. § 552(b)(4) exempts from disclosure (i) voluntarily submitted commercial or financial information provided that the submitter does not "customarily" disclose the information to the public and provided that disclosure would be likely to interfere with the continued and full availability of the information to the government, or (ii) information likely to cause substantial harm to the competitive position of the person from whom it was obtained and likely to impact on the government's ability to obtain reliable information in the future.

9 May 13

See Critical Mass Energy Project v. NRC, 975 F2d 871, 879-80 (D.C. Cir. 1992), cert. denied, 113 S.Ct. 1579 (1993); National Parks & Conservation Ass'n v. Morton, 498 F2d 765, 766 (D.C. Cir. 1974); Canadian Commercial Corp. v. Dept. of Air Force, 514 F.3d 37 (D.C. Cir., 2008).

In an effort to minimize further delay we request that you review the redactions and identify any withheld information that you wish to receive. MARCORSYSCOM will then determine whether the release of any requested information is proper under the FOIA and provide any additional releasable information in a "final release" letter. If we do not receive any notification from you, which specifically requests the release of any redacted information by May 20, 2013, this letter will become the final response and we will close this FOIA request.

If at any time you are not satisfied that a diligent effort was made to process your request, you may file an administrative appeal with the Assistant to the General Counsel (FOIA) at: Department of the Navy, Office of the General Counsel, ATTN: FOIA Appeals Office, 1000 Navy Pentagon Room 4E635, Washington DC 20350-1000.

For consideration, the appeal must be received in that office within 60 days from the date of this letter. Attach a copy of this letter and a statement regarding why you believe an adequate search was not conducted. Both your appeal letter and the envelope should bear the notation "FREEDOM OF INFORMATION ACT APPEAL". Please provide a copy of any such appeal letter to the MARCORSYSCOM address above.

Fees associated with processing your request are minimal and waived.

Any questions concerning this matter should be directed to Mrs. Bobbie Cave at (703) 432-3934 or bobbie.cave@usmc.mil.

Sincerely,



for LISA L. BAKER
Counsel

SOLICITATION, OFFER AND AWARD			1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING DO-A6	PAGE OF PAGES 1 47	
2. CONTRACT NO. M67854-13-C-6017		3. SOLICITATION NO. M67854-12-R-6017	4. TYPE OF SOLICITATION [] SEALED BID (IFB) [X] NEGOTIATED (RFP)	5. DATE ISSUED 17 Nov 2011	6. REQUISITION/PURCHASE NO. M9545012RRCR2AC6		
7. ISSUED BY MARINE CORPS SYSTEMS COMMAND-CT026 ATTN:EILEEN.LOBA@USMC.MIL 2200 LESTER STREET QUANTICO VA 22134 CODE M67854			8. ADDRESS OFFER TO (If other than Item 7) See Item 7		CODE		
TEL: 703-432-0950 FAX			TEL:		FAX		

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SOLICITATION

9. Sealed offers in original and _____ copies for furnishing the supplies or services in the Schedule will be received at the place specified in Item 8, or if handcarried, in the depository located in _____ until 10:00 AM local time 24 Jan 2012
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE (Include area code) (NO COLLECT CALLS)	C. E-MAIL ADDRESS
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OFFER (Must be fully completed by offeror)

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within _____ calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)		Net 30 Days			
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):		AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR OASYS TECHNOLOGY, LLC VADIM PLOTSKER 645 HARVEY RD STE 9 MANCHESTER NH 03103-7244		CODE 3VTS8	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print) VADIM PLOTSKER / PRESIDENT	
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15B. TELEPHONE NO (Include area code) 603-232-8221	15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE. <input type="checkbox"/>	17. SIGNATURE	18. OFFER DATE
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AWARD (To be completed by Government)

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT \$2,113,044.00	21. ACCOUNTING AND APPROPRIATION See Schedule	
22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304(c)() <input type="checkbox"/> 41 U.S.C. 253(c)()		23. SUBMIT INVOICES TO ADDRESS SHOWN IN ITEM (4 copies unless otherwise specified)	
24. ADMINISTERED BY (If other than Item 7) DCMA BOSTON 495 SUMMER ST. BOSTON MA 02210-2138 CODE S2206A SCD: C		25. PAYMENT WILL BE MADE BY DFAS - COLUMBUS CENTER DFAS CONORTH ENTITLEMENT OPERATIONS (8565) P.O 182266 COLUMBUS OH 43218-2266 CODE HQ0337	
26. NAME OF CONTRACTING OFFICER (Type or print) EILEEN Y LOBA TEL: 703-432-3681 EMAIL: Eileen.loba@usmc.mil		27. UNITED STATES OF AMERICA <i>Eileen Loba</i> (Signature of Contracting Officer)	
		28. AWARD DATE 23-Oct-2012	

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
0100	PRELIMINARY DESIGN REVIEW (PDR) CPFF This CLIN is for a Preliminary Design Review in accordance with the Statement of Work, and successful completion of PDR. FOB: Destination		Dollars, U.S.		(b)(4)
				ESTIMATED COST	(b)(4)
				(b)(4)	(b)(4)
				(b)(4)	(b)(4)

ITEM NO	SUPPLIES/SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
010001	Funding for PDR CPFF This subCLIN provides incremental funding for CLIN 0100. Contractor shall not submit vouchers against this subCLIN. Vouchers shall be submitted against the CLIN for which this funding is provided (0100). FOB: Destination MILSTRIP: M9545012RCR2AC6 PURCHASE REQUEST NUMBER: M9545012RCR2AC6		Dollars, U.S.		(b)(4)
				ESTIMATED COST	(b)(4)
				(b)(4)	(b)(4)
	(b)(4)			(b)(4)	(b)(4)

ITEM NO	SUPPLIES/SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
0101			Dollars, U.S.		NSP

PDR CDRLS - NSP

PDR CDRLS are to be completed in accordance to the statement of work, and DD1423. CDRLS are Not Separately Priced.

FOB: Destination

ESTIMATED COST

(b)(4)

ITEM NO	SUPPLIES/SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
0200			Dollars, U.S.		(b)(4)

CRITICAL DESIGN REVIEW (CDR)

CPFF

This CLIN is for Critical Design Review in accordance with the Statement of Work, and successful completion of CDR.

FOB: Destination

ESTIMATED COST

(b)(4)

(b)(4)

(b)(4)

(b)(4)

ITEM NO	SUPPLIES/SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
020001			Dollars, U.S.		(b)(4)

Critical Design Review (CDR)
CPFF

This subCLIN provides incremental funding for CLIN 0200. Contractor shall not submit vouchers against this subCLIN. Vouchers shall be submitted against the CLIN for which this funding is provided (0200).

FOB: Destination

MILSTRIP: M9545012RCR2AC6

PURCHASE REQUEST NUMBER: M9545012RCR2AC6

	ESTIMATED COST	AMOUNT
(b)(4)	(b)(4)	(b)(4)
(b)(4)	(b)(4)	(b)(4)
(b)(4)		(b)(4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0201	CDR CDRLS - NSP				NSP

CDR CDRLS are to be completed in accordance to the statement of work, and DD1423. CDRLS are Not Separately Priced.
FOB: Destination

NET AMT

ITEM NO	SUPPLIES/SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
0300			Dollars, U.S.		(b)(4)

CLRF-IC TWO PRODUCTION REPRESENTATIVES
CPFF

CLRF-IC Two Production Representative units shall be built, tested, and delivered in accordance with the Statement of Work, and the Performance Specifications.

FOB: Destination

ESTIMATED COST

(b)(4)	(b)(4)
(b)(4)	(b)(4)
(b)(4)	(b)(4)

ITEM NO	SUPPLIES/SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
030001					(b)(4)

CLRF-IC Two Production Representantive
CPFF

This subCLIN provides incremental funding for CLIN 0300. Contractor shall not submit vouchers against this subCLIN. Vouchers shall be submitted against the CLIN for which this funding is provided (0300).

FOB: Destination

MILSTRIP: M9545012RCR2AC6

PURCHASE REQUEST NUMBER: M9545012RCR2AC6

ESTIMATED COST

(b)(4)	(b)(4)
(b)(4)	(b)(4)
(b)(4)	(b)(4)

ITEM NO	SUPPLIES/SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
0400			Dollars, U.S.		(b)(4)
	FIELD USER EVALUATION (FUE) SUPPORT CPFF				
	Field User Evaluation Support is to be completed in accordance with the Statement of Work.				
	FOB: Destination				
				ESTIMATED COST	(b)(4)
				(b)(4)	(b)(4)
				(b)(4)	(b)(4)

ITEM NO	SUPPLIES/SERVICES	EST. QUANTITY	UNIT	UNIT PRICE	AMOUNT
040001			Dollars, U.S.		(b)(4)
	Field User Evaluation Support CPFF				
	This subCLIN provides incremental funding for CLIN 0400. Contractor shall not submit vouchers against this subCLIN. Vouchers shall be submitted against the CLIN for which this funding is provided (0400).				
	FOB: Destination				
	MILSTRIP: M9545012RCR2AC6				
	PURCHASE REQUEST NUMBER: M9545012RCR2AC6				
				ESTIMATED COST	(b)(4)
				(b)(4)	(b)(4)
				(b)(4)	(b)(4)
	(b)(4)				(b)(4)

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
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0401

FUE SUPPORT CDRLS - NSP

FUE Support CDRLS are to be completed in accordance to the Statement of Work,
and DD1423. CDRLS are Not Separately Priced.

FOB: Destination

NET AMT

Section C - Descriptions and Specifications

CLRF - IC**STATEMENT OF WORK**

**COMMON LASER RANGE FINDER
INTEGRATED CAPABILITY LIGHT (CLRF IC LIGHT),
PHASE ONE RESEARCH & DEVELOPMENT (R&D)**

1. SCOPE

This Statement of Work (SOW) specifies the tasks the Contractor shall perform under this contract in support of the United States Marine Corps' development of the Common Laser Rangefinder Integrated Capability Light (CLRF IC Light) System. The Contractor is responsible for providing all material, services, and necessary support documentation needed to complete the tasks identified in this SOW.

2. APPLICABLE DOCUMENTS

The following documents will be a part of this SOW as specified. The most recent revision of the referenced document will be used unless otherwise specified. In the event of conflict between the applicable documents and this SOW, this document shall take precedence. This document will not supersede applicable laws and regulations unless a specific exemption has been granted.

2.1 Specifications, Standards and Handbooks

The following specifications, standards, and handbooks of the exact revision listed below form a part of this document to the extent specified herein.

DEPARTMENT OF DEFENSE STANDARDS
MIL-STD-882D Standard Practice for System Safety
DEPARTMENT OF DEFENSE HANDBOOKS
MIL-HDBK-61A Configuration Management Guidance

(Copies of these documents are available online at <http://dodssp.daps.dla.mil>, or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2 Other Government Documents, Drawings, and Publications

The following other Government documents, drawings, and publications of the exact revision level shown form a part of this document to the extent specified herein.

CODE OF FEDERAL REGULATIONS

Title 29, Part 1910, Standard 1910.1200	Occupational Safety and Health Standards, Toxic and Hazardous Substances, Hazard Communication
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DEPARTMENT OF THE NAVY

NAVSEA S9310- AQ-SAF-010	Technical Manual for Batteries, Navy Lithium Safety Program Responsibilities and Procedures (15 July 2010 Edition)
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(Copies of this manual are available by written request from Marine Corps Systems Command, Procurement Contracting Officer.)

MARINE CORPS SYSTEMS COMMAND (MARCORSYSCOM)

PRF- PMM141/ CLRF IC L	Performance Specification For The Common Laser Range Finder Integrated Capability Light (CLRF IC Light)
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(Copies of this Performance Specification are available by written request from Marine Corps Systems Command, Procurement Contracting Officer.)

NAVSTAR GLOBAL POSITIONING SYSTEM JOINT PROGRAM OFFICE (GPS JPO)

IS-GPS-153 REVISION D	GPS User Equipment Interface Specification for the GPS Standard Serial Interface Protocol (GSSIP) of DoD Standard GPS UE Radio Receivers, 23 July 2007 (Target Sight Message ID 5029, pages B-86 and B-87)
GPU-03-105	Security Approval Requirements for Selective Availability Anti-Spoofing Module (SAASM) Host Application Equipment (HAE), 31 January 2004
GPSW/GPUG Memo, 7 Oct 2010	GPSW/GPUG Coordination on Authorization Requests to Sell and Transfer the Miniaturized Airborne GPS Receiver-2000 (MAGR-2000), Defense Advanced GPS Receiver (DAGR) and/or Miniature PLGR Engine – SAASM (MPE-S), 7 Oct 2010

(Copies of these documents are available by written request from Marine Corps Systems Command, Procurement Contracting Officer, to those private individuals or enterprises eligible to obtain export-controlled technical data in accordance with DoD 5230.25.)

2.3 Non-Government Documents, Drawings, and Publications

The following non-Government documents, drawings, and publications of the exact revision level shown form a part of this document to the extent specified herein.

NAS 411	Hazardous Materials Management Program
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(Copies of NAS 411 are available from www.aia-aerospace.org or Aerospace Industries Association of America, 1250 Eye Street, NW, Suite 1200, Washington, DC 20005-3924.)

ANSI Z400.1	Hazardous Workplace Chemicals - Hazard Evaluation and Safety Data Sheet and Precautionary Labeling Preparation
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(Copies of this document can be purchased online at www.webstore.ansi.org.)

3. GENERAL REQUIREMENTS

The major required activities are listed below:

- a. The Contractor shall conduct a CLRF IC Light Preliminary Design Review (PDR), during which the Contractor shall present the preliminary design.
- b. The Contractor shall conduct a CLRF IC Light Critical Design Review (CDR).
- c. The Contractor shall design and build the CLRF IC Light to meet the Performance Specification for the CLRF IC Light, PRF-PMM141/CLRF IC L. The production representative system will be used for the capability demonstration.
- d. The Contractor shall provide engineering and technical support to the Government during the Government CLRF IC Light demonstration.

3.1 Meetings, Formal Reviews, and Conferences

3.1.1 Access to Facilities

The Contractor shall provide the Government access to the Contractor's facilities, as required, throughout the contract period of performance. Any request for a Contractor to visit a Government site must be requested at least 30 days before the expected date of visit.

3.1.2 Contractor Responsibilities

The Contractor shall plan, host, attend, coordinate, support and conduct the meetings, formal reviews and conferences (hereinafter called "reviews"). The reviews shall be conducted at Government and Contractor facilities. Reviews requiring demonstration and/or examination of equipment shall be conducted at the Contractor's facility. All such reviews shall be included in the program schedule and may be held concurrently with the Government's approval. The Contractor shall prepare agendas and conference presentation materials, and provide minutes and reports following each review. The Government reserves the right to cancel any review or to require any review to be scheduled at critical points during the period of performance. Action item documentation, assignment of responsibility for completion and due dates shall be determined prior to adjournment of all reviews. A summary of all action items, responsible parties, and estimated completion dates shall be included with the minutes.

Deliverables under this requirement:

- CDRL A001 Conference Agenda
- CDRL A002 Conference Minutes
- CDRL A003 Presentation Materials

3.1.3 Post-Award Conference

The Contractor shall host a Post Award Conference (PAC) at the Contractor's facility within 15 days after Contract Award. During the PAC, the parties will also review the contract and all stated requirements and testing procedures, clarify any pertinent questions, and ensure the parties have a complete understanding of the technical requirements and their individual responsibilities. The Contractor shall present management, key personnel and program implementation processes. The Contractor shall prepare presentation materials providing an overview of all agenda items.

3.1.4 Preliminary Design Review

A Preliminary Design Review (PDR) shall be held in accordance with the contract schedule to determine whether the CLRF IC Light system is ready for transition to the engineering and manufacturing development phase of the program and if the Contractor has accomplished adequate design planning. The PDR shall address each equipment, hardware and software configuration item and related peculiar support equipment for compliance with the Performance Specification. The Contractor shall show and/or demonstrate that evaluations of materials, lead times, tooling, fabrication techniques, assembly methods, test equipment, skills, processes and inspection techniques have been accomplished for each equipment, hardware and software configuration item and related support equipment (specifically, the non-magnetic azimuth technology, GPS receiver, optics, and laser range finder, at a minimum); show and/or demonstrate that producibility objectives have been achieved; and shall identify all single source, sole source and diminishing source(s). The Contractor shall also provide a diagram of the system menu/display. This review will evaluate the progress, technical adequacy and risk resolution (on a technical, cost and schedule basis) of the design and will assess the technical risk associated with the selected manufacturing (assembly) methods (processes). During this review the Contractor shall present their plan to meet the contract schedule...

Deliverables under this requirement:

- CDRL A004 Technical Report-Study/Services (Post-PDR Report)
- CDRL A005 Developmental Design Drawings/Models and Associated Lists
- CDRL A006 Design Review Information Package (PDR)

3.1.5 Critical Design Review

The Contractor shall participate in a CDR in accordance with the contract schedule. The Contractor shall present a final design that incorporates all changes to the design presented at the PDR. The Contractor shall provide a detailed review of the hardware and software design for the CLRF IC Light and all data items required by the contract. The Contractor shall provide traceability which demonstrates that the design furnished at CDR implements the performance requirements of the CLRF IC Light, and shall present the methods used to verify and validate the design.

Deliverables under this requirement:

- CDRL A007 Technical Report-Study/Services (Post-CDR Report)
- CDRL A008 Product Drawings/Models and Associated Lists

- CDRL A009 Design Review Information Package (CDR)

3.2 Test/Verification

3.2.1 Demonstrations

In support of PDR, the Contractor shall test the key subcomponents of the system. Key subcomponents shall at a minimum include the non-magnetic azimuth technology, GPS receiver, optics, and laser range finder. In support of CDR, the Contractor shall conduct system-level brass-board testing. The tests shall focus on the verification of the Performance Specification requirements. The Government reserves the right to witness any portion of the testing.

Deliverables under this requirement:

- CDRL A00A Test Procedure (Demonstration)
- CDRL A00B Test/Inspection Report (Demonstration)

3.2.2 Test Readiness Review

A Test Readiness Review (TRR) will be held at the Contractor's facility prior to the Production Representative Test. During the TRR, the test plans and schedules will be reviewed. TRR entry criteria include: availability of all test plans for review; identification and coordination of all testing personnel, facilities, articles, and instrumentation; and definition and acceptance of all test participants' roles and responsibilities. TRR exit criteria include: completion and approval of all test plans; identification and coordination of all required test resources; identification of all test program risks and approval of applicable mitigation plans or acceptance of risks; determination that the test program is executable within cost, schedule, and performance risks; and identification, understanding, and acceptance of all known anomalies and a high degree of confidence that these anomalies will not affect the ability to pass all tests successfully.

3.2.3 Production Representative System Test

The contractor shall test and deliver two CLRF IC Light Production Representative Systems that meets the specifications and criteria of the Performance Specification for the CLRF IC Light, PRF-PMM141/CLRF IC L. Production Representative Systems shall be systems that accurately represent the production configuration for both hardware and software, such as a mature Engineering Development Model (EDM), but not produced on a final production line, e.g., hand tooled, although some components may be from production tooling. While highly desirable, the item does not have to be manufactured on a formal production line to be considered production representative. The final build shall reflect the Contractor's CDR baseline. The Contractor shall conduct testing on the production representative systems. The Contractor shall develop for Government approval test procedures to demonstrate the adequacy and suitability of the Contractor's system in achieving all of the requirements in the Performance Specification for the CLRF IC Light, PRF-PMM141/CLRF IC L with the exception of the fungus requirement which shall be verified by analysis for the R&D contract. The results of the test shall demonstrate that the system does not negatively impact established requirements. The Government reserves the right to witness any portion of the testing.

Deliverables under this requirement:

- CDRL A00C Test Procedure (Production Representative System Test)
- CDRL A00D Test/Inspection Report (Production Representative System Test)

3.2.4 Field User Evaluation

A Field User Evaluation (FUE) will be conducted on the production representative systems. It is anticipated that the FUE will be held at Fort A.P. Hill, VA. The Contractor shall provide a team of no more than three (3) people to provide technical support to the evaluation. The team shall have the capability to operate and troubleshoot the system.

3.3 Program Management and Data Support

3.3.1 Program Management

The Contractor shall establish and maintain program management practices throughout the period of performance. Program management practices shall provide visibility into the Contractor's organization and techniques used in managing the program, including subcontractors and data management. Documentation shall be readily available to Government representative(s) during planned visits. The Contractor shall submit monthly progress reports.

Deliverable under this requirement:

- CDRL A00E Contractor's Progress, Status, and Management Report

3.3.2 Data Management

The Contractor shall establish a single, centralized system for management of all data required under this contract. The Contractor, in developing information that will be furnished to the Government, shall make the maximum use of existing data and provide maximum multiple use of technical information. Specific data management functions shall include schedule control for deliverables, maintenance of deliverables, and approval of deliverable format, distribution, and delivery of data products. The system shall include facilities for storage of all data developed or utilized for this contract, and shall provide equal access to data by the Government. The Contractor shall ensure all data is centrally available for Government review to ensure continuity of the system fabrication and supporting documentation. The Government reserves the right to review all data associated with and developed for the CLRF IC Light system.

3.4 Systems Engineering

The Contractor shall establish and maintain an effective systems engineering program throughout the contract period of performance. The systems engineering program shall be documented in a System Engineering Management Plan to be provided to the Government.

Deliverable under this requirement:

- CDRL A00F Systems Engineering Management Plan

3.4.1 Open Systems Design

The contractor shall use, to the maximum extent possible, an open systems approach as the preferred design strategy to: (1) choose commercially supported specifications and standards for selected system interfaces (external, internal, functional and physical), products, practices and tools; and (2) build open system architectures as the primary foundation in developing the proposed system and its elements. Open systems is a system design philosophy that uses widely-accepted, industry-approved interface standards that will allow technological upgrades in system components to be more easily inserted in the future. The contractor shall identify the means for ensuring conformance to open systems standards and profiles throughout the development process and provide evidence that the process being used to manage the open systems approach supports open system benefits such as portability, interoperability, technology insertion, vendor independence, reusability, scalability and commercial product based maintainability.

3.4.2 Reliability/Maintainability

The Contractor shall execute a Reliability Program to ensure the CLRF IC Light meets the reliability requirements as stated in the Performance Specification. The CLRF IC Light design shall be monitored throughout the period of performance to identify and assess any changes which would impact reliability. The program shall encompass all aspects of reliability with respect to the selection of components, predictions and testing. The Contractor shall develop and maintain a reliability database/model, and shall inform the Government of any part or component which could be a problem from a reliability perspective. The Contractor is encouraged to apply MIL-HDBK-470 as guidance. The Reliability Program shall include, at a minimum, the following:

3.4.2.1 Failure Modes, Effects and Criticality Analysis

The Contractor shall prepare a Failure Modes, Effects and Criticality Analysis (FMECA) to identify all system failure modes. Failure modes resolved by inherent Built-in Test (BIT) capabilities shall be identified in the analysis. For all failure modes not resolved by BIT, this analysis shall identify the Single Point of Failure. The failure effects to the system shall be identified in addition to the criticality level of each failure (inoperable or degraded). In the

event of a degraded effect, the Contractor shall identify the operational/inoperable functional capabilities. Failure indications/symptoms to the operator/maintainer shall be detailed within the report.

Deliverable under this requirement:

- CDRL A00G Failure Mode Effects, and Criticality Analysis Report

3.4.2.2 Parts Screening

The Contractor shall establish procedures and controls to ensure products obtained from suppliers, vendors and subcontractors do not degrade the ability of the CLRF IC to achieve the requirements identified in the Performance Specification.

3.4.2.3 Reliability Predictions

The Contractor shall provide reliability predictions based on their design baseline. Reliability data shall be predicted and/or adjusted based on the CLRF IC Light lifecycle Environmental Profile (LCEP) and shall account for end-user environmental conditions, including the affects of sun load conditions. System environmental parameters presented in the Performance Specification shall apply. De-rating criteria applied to calculations shall be detailed within the reliability report. Where relevant actual/historical reliability data exists, this data shall take precedence over predicted data and be adjusted appropriately to account for differences between the environments for the historical data and the specified CLRF IC Light environment. The reliability predictions shall be decomposed down to the lowest appropriate design indenture level and updated as needed to reflect design or mission profile changes. In the event that the system architecture provides redundant functional/physical capabilities, the reliability report shall explain how this redundancy was taken into account in the reliability predictions and on mission reliability.

Deliverable under this requirement:

- CDRL A00H Reliability Prediction and Documentation of Supporting Data

3.4.3 Quality Program

The Contractor's quality management system shall ensure product conformation to contractual requirements. The Contractor shall have implemented, documented, and have previously demonstrated the ability to maintain the quality management system to be used on the contract. The Contractor shall make available all quality management documentation for the Government to review upon request.

3.4.4 Radio Frequency Spectrum Compatibility

The Contractor shall submit the data required to complete DD Form 1494 for obtaining an approved frequency for the CLRF IC Light, if applicable.

Deliverables under this requirement:

- CDRL A00J Spectrum Certification Spectral Characteristics Data

3.5 Configuration Management (CM) Process

The Contractor shall maintain a CM process for the control of all hardware and software configuration documentation, media and parts representing or comprising the CLRF IC Light. MIL-HDBK-61A may be used as guidance. The Contractor's CM process shall consist of configuration identification, configuration control, Configuration Status Accounting (CSA) and configuration audits. The Contractor shall notify the Government of any changes at the Contractor's facility which affect the Contractor's established CM process.

3.5.1 Configuration Status Accounting

The Contractor shall establish and maintain a CSA database which represents the configuration of the CLRF IC Light. All baselines and changes shall be documented in the Contractor's CSA database. The Contractor's CSA database shall permit acceptance of commercial product information; however, if requirements to report data outside of the Contractor's CSA database or format exist, the information may be delivered as a supplement to prevent disruption to their existing system. The Contractor's CSA database shall reconcile any differences between the supplier information and Contractor practices to provide the Government with clear accountability of product information. Additionally, the CSA database shall provide a reliable source of configuration information to support

CLRF IC Light activities, including program management, systems engineering, logistics support and modification/maintenance actions.

Deliverables under this requirement:

- CDRL A00K: Configuration Status Accounting Information

3.5.2 Baseline Management

The Contractor shall be responsible for maintaining the currency and accuracy of the CLRF IC Light configuration baselines to ensure adequate configuration management of CLRF IC Light form, fit, function and interface data. The Contractor shall establish configuration management processes which identify how the CLRF IC Light configuration baselines will be managed/ maintained. These processes shall be defined in the Contractor's configuration management plan and made available for Government review.

3.5.3 Software Requirements Specification(s)

The Contractor shall provide Software Requirements Specification(s) (SRS(s)). The SRS(s) shall specify the requirements for the Software Configuration Item(s) (SCI) and the verification methods to be used to ensure that each requirement has been met.

Deliverables under this requirement:

- CDRL A00L Software Requirements Specifications

3.5.4 System/Subsystem Specification(s)

The Contractor shall provide System/Subsystem Specification(s) (SSS(s)). The SSS(s) shall specify the requirements for a system or subsystem and the verification methods to be used to ensure that each requirement has been met. The SSS(s) shall be used as the basis for the design of a system or subsystem.

Deliverables under this requirement:

- CDRL A00M System/Subsystem Specification

3.5.5 System/Subsystem Design Description

The Contractor shall provide a System/Subsystem Design Description (SSDD). The SSDD shall describe the system- or subsystem-wide design and the architectural design of a system or design of a system or subsystem.

Deliverables under this requirement:

- CDRL A00N System/Subsystem Design Description

3.5.6 Interface Requirements Specification(s)

The Contractor shall provide Interface Requirements Specification(s) (IRS(s)). The IRS(s) shall specify the requirements imposed on one or more systems, subsystems, Hardware Configuration Items (HWCI), SCIs, manual operations or other system components to achieve one or more interfaces among these entities.

Deliverables under this requirement:

- CDRL A00P Interface Requirements Specification

3.5.7 Interface Design Description

The Contractor shall provide Interface Design Description(s) (IDD(s)). The IDD(s) shall describe the interface characteristics of one or more systems, subsystems, HWCI, SCIs, manual operations or other system components.

Deliverables under this requirement:

- CDRL A00Q Interface Design Description

3.5.8 Interface Control Document

The Contractor shall provide an Interface Control Document that includes information on all necessary messages to communicate with the CLRF IC Light.

Deliverables under this requirement:

- CDRL A00R Interface Control Document

3.5.9 Core Software Metrics

The Contractor shall define, develop and implement the following minimum set of core metrics:

- a. Schedule for Software Integration
- b. Organizational staffing chart for Software Team
- c. Quality of Software - defect rate, defect density, actual defects vs. expected defects
- d. Size/Stability of Software- monitor the code changes and/or additions for the integration effort

The metrics shall clearly portray variances between planned and actual performance, provide prediction or early detection of situations that require management attention and support the assessment of the impact of proposed changes on the program.

Deliverables under this requirement:

- CDRL A00S Technical Report-Study/Services (Core Software Metrics)

3.6 Producibility

The Contractor shall apply effective producibility principles during the CLRF IC Light design process to ensure that the production units can be efficiently and effectively manufactured using the anticipated production facilities, equipment, materials, manpower and processes. The producibility planning effort shall also address production control, quality control, tooling and inspection. The Contractor shall report on the progress of this effort during the PDR and CDR and make any data created available to the Government upon request. The Contractor shall prepare and deliver a Producibility Analysis Report.

Deliverables under this requirement:

- CDRL A00T Producibility Analysis Report

3.7 Environment, Safety, and Occupational Health

3.7.1 System Safety

The Contractor shall identify and evaluate CLRF IC Light environmental, safety and occupational health hazards; define risk levels; and establish a program that manages the probability and severity of all hazards associated with development, manufacture, use and disposal of the system in accordance with MIL-STD-882D. Residual risks will be evaluated by the Government in accordance with MIL-STD-882D and accepted as appropriate prior to exposing people, equipment or the environment to known system related ESOH risks. The Contractor must identify all explosive safety risks as such in the system safety documentation.

3.7.2 Safety Assessment

The Contractor shall perform and document a Safety Assessment to identify all safety features of the hardware, software and system design and to identify procedural, hardware and software-related hazards that may be present in the CLRF IC Light including specific procedural controls and precautions that should be followed. In addition, the Contractor shall make recommendations applicable to hazards at the interface of the CLRF IC Light as outlined in the CLRF IC Light Performance Specification.

3.7.3 System Safety Assessment Report

The Contractor shall provide a Safety Assessment Report (SAR) that documents the Safety Assessment and clearly identifies any residual risks of the CLRF IC Light. The SAR shall include relevant Material Safety Data Sheets.

Deliverables under this requirement:

- CDRL A00U Safety Assessment Report

3.7.4 System Safety Working Group Support

Once every six months, or as needed, a Government-chaired System Safety Working Group (SSWG) shall meet to review safety issues. The Contractor shall be a participating member of the SSWG. The meetings shall be held at the Contractor's facility. As a minimum, the agenda shall provide for status reporting, analysis of problem areas, evaluation of schedules and proposed changes to the program.

3.7.5 Safety Verification

The Contractor shall define and perform tests, demonstrations, develop models, and otherwise verify the compliance of the system with safety requirements on safety critical hardware, software, and procedures. Where hazards are identified during the development efforts and analysis or inspection cannot determine the adequacy of actions taken to reduce the risk, safety tests shall be specified and conducted to evaluate the overall effectiveness of the actions taken. System Safety Program Plans and test plan and procedure documents shall be revised to include these tests. Where costs for safety testing would be prohibitive, safety characteristics or procedures may be verified by engineering analyses, analogy, laboratory test, functional mockups, or models and simulations, when approved by the Government. Specific safety tests shall be integrated into appropriate system test and demonstration plans, including verification and validation plans, to the maximum extent possible.

3.7.6 Hazardous Materials Management Program

The Contractor shall provide a Hazardous Materials Management Program (HMMP) and a Pollution Prevention (P2) Plan to the Government for review and approval. The HMMP Plan shall define the Contractor's approach to assure that consideration is given throughout all acquisition phases of the system; hazardous materials and processes associated with each contract hardware deliverable item are selectively identified and evaluated based on environmental and health concerns; and hazardous material elimination, minimization or control are considered and detailed in the system design and the manufacturing process.

Deliverables under this requirement:

- CDRL A00V Hazardous Materials Management Program Plan

3.7.7 Hazardous Material Management Program Report

The Contractor shall provide a HMMP and P2 Plan Report to the Government for review and approval. The HMMP and P2 Reports shall identify the status of the Contractor's HMMP and P2 Plans to assure that the plan is followed throughout all acquisition phases of the system; hazardous materials and processes associated with each contract hardware deliverable item are selectively identified and evaluated based on environmental and health concerns; and hazardous material elimination, minimization, or control are considered and detailed in the system design and the manufacturing process.

Deliverables under this requirement:

- CDRL A00W Hazardous Materials Management Program Report

3.7.8 Environmental Considerations

The Contractor shall provide information on the potential for any adverse environmental impacts from the manufacturing, operation, maintenance, and disposal of the CLRF IC Light. This information will be used to assist the Government in making a preliminary National Environmental Policy Act (NEPA) decision and in preparation of formal NEPA documents, which include Categorical Exclusion (CATEX), Environmental Assessment (EA), and Environmental Impact Statement (EIS). Such environmental impacts include air, soil, wetlands, water, flora, fauna, endangered species, emissions, and toxic waste resulting from development, maintenance (coatings and primers), operation, disposal, etc.

Deliverables under this requirement:

- CDRL A00X Technical Report, Study/Services (ESOH)

3.8. Supportability

3.8.1 Operator's Manuals

The Contractor shall provide a draft Operator's Manual in Contractor format. The Operator's Manual, at a minimum, shall include introduction, Preparation for Use and Installation, Principles of Operation, Operator Maintenance and Servicing Instructions (preventive and corrective), Troubleshooting, Parts List, Operational Illustrations, Safety Precautions (Warnings, Cautions, and Notes) and information on the functionality of the CLRF IC, its components/accessories, system operation from turn-on to system shut down including adjustments, and operator checks and services.

Deliverables under this requirement:

- CDRL A00Y Commercial Off-The-Shelf Manuals and Associated Supplemental Data

3.8.2 Maintenance Support Plan

The Contractor shall provide a Maintenance Support summary which shall identify the maintenance tasks for the CLRF IC. The Maintenance Support summary shall identify the criteria for repair, manpower skills, and facility requirements for the CLRF IC.

Deliverables under this requirement:

- CDRL A010 Maintenance Support Plan

3.9 Lasers

The Contractor shall ensure proper design, use, and disposal of all equipment and systems capable of producing laser radiation including laser fiber optics. The Contractor shall verify that proper labeling is in place as required for the laser classification. The Contractor shall be responsible for providing safety support to the Government for all laser safety related requirements.

3.10 Security Requirements

All CLRF IC Light systems will require SAASM GPS. The Contractor facilities and personnel shall have the appropriate clearances and approval to store and use GPS data and equipment required to operate the system. The Contractor shall provide evidence that their Host Application Equipment has been approved per GPU-03-105.

3.11 Government Furnished Property.

3.11.1 Government Furnished Equipment (GFE).

If any GFE is provided to the contractor, the contractor shall provide for accountability, security, and storage for the GFE provided. Per GPSW/GPUG memo regarding direct sales of GB GRAM dtd 7 Oct 2010, if GB GRAM is used, it must be provided by the Government as GFE. Update of any Government provided GB GRAM to the latest software baseline shall be the responsibility of the Contractor. The following model GB GRAM will be available 2 weeks after request:

Name: Miniature PLGR Engine-SAASM (MPE-S)

Part Number: 987-1856-023 Rev G (contains the SAASM 3.2)

Description: The MPE-S is the US Army Standard Embedded GPS Receiver for the Ground-Based GPS Receiver Application Module (GB-GRAM) program. The MPE-S is based on the Rockwell Collins Selective Availability/Anti-Spoofing Module (SAASM). SAASM encapsulates all classified data and signal processing into one tamper-proof module. SAASM provides jamming and spoofing protection for US and allied forces operating in hostile environments.

Manufacturer: Rockwell Collins (Cage Code 13499)

NSN: 5825-01-529-2565

Deliverables under this requirement:

- CDRL A011 Receipt of Government Materiel Report

END OF STATEMENT OF WORK

Section D - Packaging and Marking

PACKAGING/MARKING

D-1 CLIN 0100 – PRELIMINARY DESIGN REVIEW (PDR)

Preliminary Design Review will be conducted in accordance with the Statement of Work

D-2 CLIN 0101 – PDR Contract Data Requirements List (CDRLs)

All deliverables under this contract shall be packaged and delivered in accordance with the instructions provided in each individual CDRL.

D-3 CLIN 0200 – CRITICAL DESIGN REVIEW (CDR)

Critical Design Review will be conducted in accordance with the Statement of Work

D-4 CLIN 0201 – CDR CDRLS

All deliverables under this contract shall be packaged and delivered in accordance with the instructions provided in each individual CDRL.

D-5 CLIN 0300 - CLRF-IC TWO PRODUCTION REPRESENTATIVES

All packing shall be in compliance with MIL-STD-129P. Packaging does not need to be final tactical packing however, must meet requirements for transportation to the government.

D-6 CLIN 0400 - FIELD USER EVALUATION (FUE) SUPPORT

FUE Support will be conducted in accordance with the Statement of Work

D-7 CLIN 0401 - FUE SUPPORT CDRLS

All deliverables under this contract shall be packaged and delivered in accordance with the instructions provided in each individual CDRL.

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0100	Destination	Government	Destination	Government
010001	Destination	Government	Destination	Government
0101	Destination	Government	Destination	Government
0200	Destination	Government	Destination	Government
020001	Destination	Government	Destination	Government
0201	Destination	Government	Destination	Government
0300	Destination	Government	Destination	Government
030001	Destination	Government	Destination	Government
0400	Destination	Government	Destination	Government
040001	Destination	Government	Destination	Government
0401	Destination	Government	Destination	Government

CLAUSES INCORPORATED BY REFERENCE

52.246-8 Inspection Of Research And Development CostMAY 2001
Reimbursement

Section F - Deliveries or Performance

SECTION F SCHEDULE

ITEM	QTY/ UNIT	DESCRIPTION	DESTINATION	DELIVERY DATE/PERIOD OF PERFORMANCE
0100	N/A	COMPLETION OF CLRF-IC PRELIMINARY DESIGN REVIEW (PDR)	Marine Corps Systems Command PM 14-AFSS Attn: Bruce Leaman Contracting Officer Representative 2200 Lester Street Quantico, VA 22134	Completed no later than 6 months from contract award
0101	Per DD Form 1423	PDR CDRLS	Per DD Form 1423	See DD Form 1423
0200	N/A	COMPLETION OF CLRF-IC CRITICAL DESIGN REVIEW (CDR)	Marine Corps Systems Command PM 14-AFSS Attn: Bruce Leaman Contracting Officer Representative 2200 Lester Street Quantico, VA 22134	Completed no later than 9 months from contract award
0201	Per DD Form 1423	CDR CDRLS	Per DD Form 1423	See DD Form 1423
0300	2 Each	CLRF-IC PRODUCTION REPRESENTATIVE UNITS	Marine Corps Systems Command PM 14-AFSS Attn: Bruce Leaman Contracting Officer Representative 2200 Lester Street Quantico, VA 22134	Completed no later than 14 months after contract award.
0400	N/A	CLRF-IC FIELD USER EVALUATION TEST SUPPORT	Fort A.P. Hill, VA	Completed no later than 15 months from contract award
0401	Per DD Form 1423	FUE TEST SUPPORT CDRLS	Per DD Form 1423	See DD Form 1423

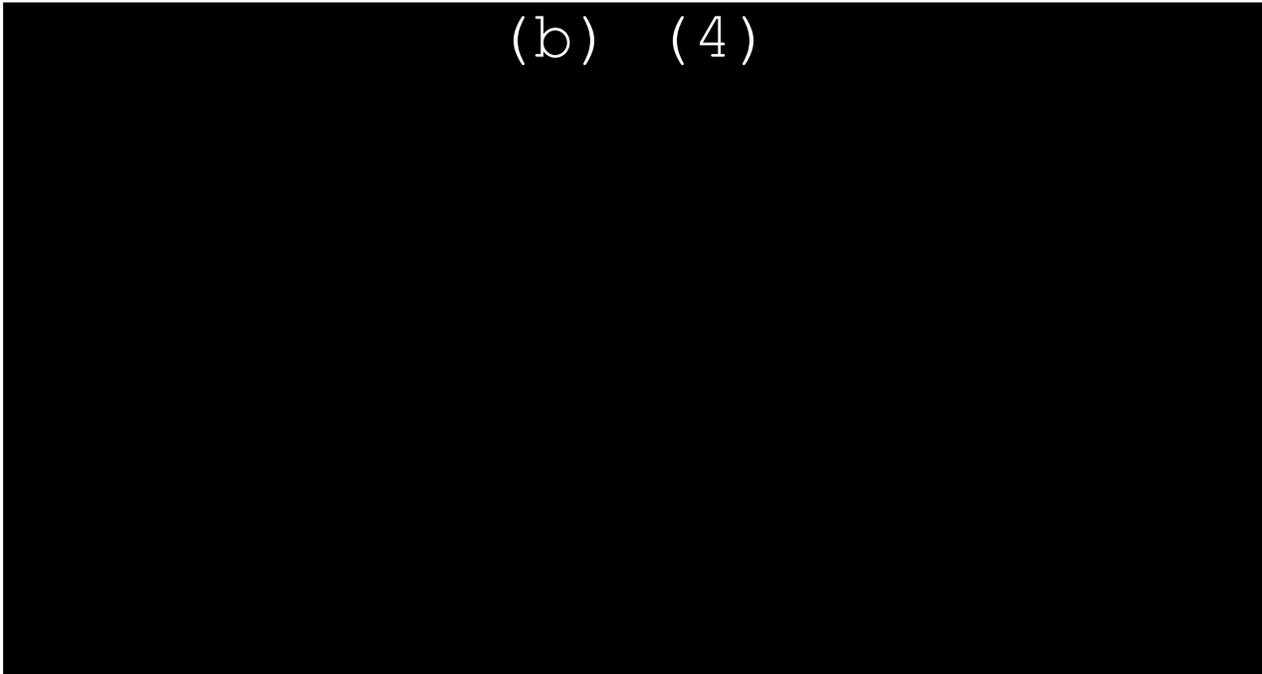
CLAUSES INCORPORATED BY REFERENCE

52.242-15	Stop-Work Order	AUG 1989
52.242-15 Alt I	Stop-Work Order (Aug 1989) - Alternate I	APR 1984
52.247-34	F.O.B. Destination	NOV 1991

Section G - Contract Administration Data

FUNDING TABLE

This table reflects current CLIN/SLIN funding, which is subject to the requirements of FAR 52.232-22 (Limitation of Funds). Funding allocations specific to cost and fee are also provided herein.



ACCOUNTING AND APPROPRIATION DATA



CLAUSES INCORPORATED BY REFERENCE

252.201-7000

Contracting Officer's Representative

DEC 1991

CLAUSES INCORPORATED BY FULL TEXT

252.232-7006 WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (JUN 2012)

(a) Definitions. As used in this clause--

Department of Defense Activity Address Code (DoDAAC) is a six position code that uniquely identifies a unit, activity, or organization.

Document type means the type of payment request or receiving report available for creation in Wide Area WorkFlow (WAWF).

Local processing office (LPO) is the office responsible for payment certification when payment certification is done external to the entitlement system.

(b) Electronic invoicing. The WAWF system is the method to electronically process vendor payment requests and receiving reports, as authorized by DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports.

(c) WAWF access. To access WAWF, the Contractor shall--

(1) Have a designated electronic business point of contact in the Central Contractor Registration at <https://www.acquisition.gov>; and

(2) Be registered to use WAWF at <https://wawf.eb.mil/> following the step-by-step procedures for self-registration available at this Web site.

(d) WAWF training. The Contractor should follow the training instructions of the WAWF Web-Based Training Course and use the Practice Training Site before submitting payment requests through WAWF. Both can be accessed by selecting the "Web Based Training" link on the WAWF home page at <https://wawf.eb.mil/>.

(e) WAWF methods of document submission. Document submissions may be via Web entry, Electronic Data Interchange, or File Transfer Protocol.

(f) WAWF payment instructions. The Contractor must use the following information when submitting payment requests and receiving reports in WAWF for this contract/order:

(1) Document type. The Contractor shall use the following document type(s).

Cost Voucher

(2) Inspection/acceptance location. The Contractor shall select the following inspection/acceptance location(s) in WAWF, as specified by the contracting officer.

The following is applicable only to the final delivery of hardware and data. The Inspection and Acceptance location for CLIN deliverables shall be at the location specified in Section F on the contract

(Contracting Officer: Insert inspection and acceptance locations or "Not applicable.")

(3) Document routing. The Contractor shall use the information in the Routing Data Table below only to fill in applicable fields in WAWF when creating payment requests and receiving reports in the system.

Routing Data Table*

Field Name in WAWF	Data to be entered in WAWF
--------------------	----------------------------

Pay Official DoDAAC		HQ0337
Issue By DoDAAC	M67854	
Admin DoDAAC	S2206A	
Inspect By DoDAAC	M67854	
DCAA Auditor DoDAAC	HAA813	

(*Contracting Officer: Insert applicable DoDAAC information or ``See schedule" if multiple ship to/acceptance locations apply, or ``Not applicable.")

(4) Payment request and supporting documentation. The Contractor shall ensure a payment request includes appropriate contract line item and subline item descriptions of the work performed or supplies delivered, unit price/cost per unit, fee (if applicable), and all relevant back-up documentation, as defined in DFARS Appendix F, (e.g. timesheets) in support of each payment request.

(5) WAWF email notifications. The Contractor shall enter the email address identified below in the ``Send Additional Email Notifications" field of WAWF once a document is submitted in the system.

Eileen.loba@usmc.mil
Bruce.Leaman@usmc.mil

(g) WAWF point of contact. (1) The Contractor may obtain clarification regarding invoicing in WAWF from the following contracting activity's WAWF point of contact.

John E Corrigan – john.corrigan@usmc.mil

(2) For technical WAWF help, contact the WAWF helpdesk at 866-618-5988.

(End of clause)

GOVERNMENT POINTS OF CONTACT

Listed Below are the Government points of contact for this effort:

ROLE	NAME	ADDRESS	PHONE	EMAIL
Procuring Contracting Officer	Eileen Loba	MARCORSYSCOM 2200 Lester Street Quantico, VA 22134	(703) 432-3293	Eileen.loba@usmc.mil
Administrative Contracting Officer	Carl Morandus	DCMA Boston 2 Wall Street, Suite 203 Manchester, NH 03101	(603)621-2918	Carl.morandus@dcma.mil
Contracting Officer Representative	Bruce Leaman	MARCORSYSCOM PG-14 Armor Fire Support Systems (AFSS) 2200 Lester Street Quantico, VA	(703)432-4054	Bruce.Leaman@usmc.mil

		22134		
Payment Office	DFAS - Columbus Center C/O North Entitlement Operations	P.O. Box 182266 Columbus, OH 43218	(800) 756-4571	N/A

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JAN 2012
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	SEP 2006
52.203-7	Anti-Kickback Procedures	OCT 2010
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-13	Contractor Code of Business Ethics and Conduct	APR 2010
52.204-2	Security Requirements	AUG 1996
52.204-4	Printed or Copied Double-Sided on Postconsumer Fiber Content Paper	MAY 2011
52.204-10	Reporting Executive Compensation and First-Tier Subcontract Awards	AUG 2012
52.204-99 (Dev)	System for Award Management Registration (Deviation)	AUG 2012
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	DEC 2010
52.209-9	Updates of Publicly Available Information Regarding Responsibility Matters	FEB 2012
52.215-2	Audit and Records--Negotiation	OCT 2010
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.215-11	Price Reduction for Defective Certified Cost or Pricing Data-- Modifications	AUG 2011
52.215-21	Requirements for Certified Cost or Pricing Data or Information Other Than Certified Cost or Pricing Data-- Modifications	OCT 2010
52.215-23	Limitations on Pass-Through Charges	OCT 2009
52.216-8	Fixed Fee	JUN 2011
52.219-8	Utilization of Small Business Concerns	JAN 2011
52.219-9	Small Business Subcontracting Plan	JAN 2011
52.219-16	Liquidated Damages-Subcontracting Plan	JAN 1999
52.222-1	Notice To The Government Of Labor Disputes	FEB 1997
52.222-3	Convict Labor	JUN 2003
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	MAR 2007
52.222-35	Equal Opportunity for Veterans	SEP 2010
52.222-36	Affirmative Action For Workers With Disabilities	OCT 2010
52.222-37	Employment Reports on Veterans	SEP 2010
52.222-40	Notification of Employee Rights Under the National Labor Relations Act	DEC 2010
52.222-50	Combating Trafficking in Persons	FEB 2009
52.222-54	Employment Eligibility Verification	JUL 2012
52.223-3	Hazardous Material Identification And Material Safety Data	JAN 1997
52.223-6	Drug-Free Workplace	MAY 2001
52.223-18	Encouraging Contractor Policies To Ban Text Messaging While Driving	AUG 2011
52.225-13	Restrictions on Certain Foreign Purchases	JUN 2008
52.227-1	Authorization and Consent	DEC 2007
52.227-1 Alt I	Authorization And Consent (Dec 2007) - Alternate I	APR 1984
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	DEC 2007

52.227-10	Filing Of Patent Applications--Classified Subject Matter	DEC 2007
52.227-11	Patent Rights--Ownership By The Contractor	DEC 2007
52.228-7	Insurance--Liability To Third Persons	MAR 1996
52.232-9	Limitation On Withholding Of Payments	APR 1984
52.232-18	Availability Of Funds	APR 1984
52.232-22	Limitation Of Funds	APR 1984
52.232-25	Prompt Payment	OCT 2008
52.232-25 Alt I	Prompt Payment (Oct 2008) Alternate I	FEB 2002
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.232-99 (Dev)	Providing Accelerated Payment to Small Business Subcontractors (Deviation)	AUG 2012
52.233-1	Disputes	JUL 2002
52.233-1 Alt I	Disputes (Jul 2002) - Alternate I	DEC 1991
52.233-3	Protest After Award	AUG 1996
52.233-3 Alt I	Protest After Award (Aug 1996) - Alternate I	JUN 1985
52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.242-1	Notice of Intent to Disallow Costs	APR 1984
52.242-4	Certification of Final Indirect Costs	JAN 1997
52.242-13	Bankruptcy	JUL 1995
52.243-2	Changes--Cost-Reimbursement	AUG 1987
52.243-2 Alt V	Changes--Cost-Reimbursement (Aug 1987) - Alternate V	APR 1984
52.243-6	Change Order Accounting	APR 1984
52.244-2	Subcontracts	OCT 2010
52.244-5	Competition In Subcontracting	DEC 1996
52.244-6	Subcontracts for Commercial Items	DEC 2010
52.245-1	Government Property	APR 2012
52.245-1 Alt I	Government Property (Apr 2012) Alternate I	APR 2012
52.246-23	Limitation Of Liability	FEB 1997
52.246-25	Limitation Of Liability--Services	FEB 1997
52.249-6	Termination (Cost Reimbursement)	MAY 2004
52.249-14	Excusable Delays	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.203-7000	Requirements Relating to Compensation of Former DoD Officials	SEP 2011
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense- Contract-Related Felonies	DEC 2008
252.203-7002	Requirement to Inform Employees of Whistleblower Rights	JAN 2009
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7008	Export-Controlled Items	APR 2010
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.219-7003	Small Business Subcontracting Plan (DOD Contracts)	AUG 2012
252.223-7004	Drug Free Work Force	SEP 1988
252.225-7006	Quarterly Reporting of Actual Contract Performance Outside the United States	OCT 2010
252.225-7012	Preference For Certain Domestic Commodities	JUN 2012
252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns	SEP 2004
252.227-7000	Non-estoppel	OCT 1966
252.227-7013	Rights in Technical Data--Noncommercial Items	FEB 2012
252.227-7014	Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation	FEB 2012
252.227-7016	Rights in Bid or Proposal Information	JAN 2011

252.227-7019	Validation of Asserted Restrictions--Computer Software	SEP 2011
252.227-7025	Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends	MAR 2011
252.227-7027	Deferred Ordering Of Technical Data Or Computer Software	APR 1988
252.227-7030	Technical Data--Withholding Of Payment	MAR 2000
252.227-7037	Validation of Restrictive Markings on Technical Data	JUN 2012
252.227-7039	Patents--Reporting Of Subject Inventions	APR 1990
252.231-7000	Supplemental Cost Principles	DEC 1991
252.232-7003	Electronic Submission of Payment Requests and Receiving Reports	JUN 2012
252.232-7010	Levies on Contract Payments	DEC 2006
252.242-7004	Material Management And Accounting System	MAY 2011
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	JUN 2012
252.244-7001	Contractor Purchasing System Administration	JUN 2012
252.245-7003	Contractor Property Management System Administration	APR 2012
252.247-7023	Transportation of Supplies by Sea	MAY 2002

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52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27(a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

(End of clause)

52.216-7 ALLOWABLE COST AND PAYMENT (JUN 2011)

(a) Invoicing.

(1) The Government will make payments to the Contractor when requested as work progresses, but (except for small business concerns) not more often than once every 2 weeks, in amounts determined to be allowable by the Contracting Officer in accordance with Federal Acquisition Regulation (FAR) subpart 31.2 in effect on the date of this contract and the terms of this contract. The Contractor may submit to an authorized representative of the Contracting Officer, in such form and reasonable detail as the representative may require, an invoice or voucher supported by a statement of the claimed allowable cost for performing this contract.

(2) Contract financing payments are not subject to the interest penalty provisions of the Prompt Payment Act. Interim payments made prior to the final payment under the contract are contract financing payments, except interim payments if this contract contains Alternate I to the clause at 52.232-25.

(3) The designated payment office will make interim payments for contract financing on the 30th day after the designated billing office receives a proper payment request.

In the event that the Government requires an audit or other review of a specific payment request to ensure compliance with the terms and conditions of the contract, the designated payment office is not compelled to make payment by the specified due date.

(b) Reimbursing costs. (1) For the purpose of reimbursing allowable costs (except as provided in subparagraph (b)(2) of the clause, with respect to pension, deferred profit sharing, and employee stock ownership plan contributions), the term "costs" includes only--

(i) Those recorded costs that, at the time of the request for reimbursement, the Contractor has paid by cash, check, or other form of actual payment for items or services purchased directly for the contract;

(ii) When the Contractor is not delinquent in paying costs of contract performance in the ordinary course of business, costs incurred, but not necessarily paid, for--

(A) Supplies and services purchased directly for the contract and associated financing payments to subcontractors, provided payments determined due will be made--

(1) In accordance with the terms and conditions of a subcontract or invoice; and

(2) Ordinarily within 30 days of the submission of the Contractor's payment request to the Government;

(B) Materials issued from the Contractor's inventory and placed in the production process for use on the contract;

(C) Direct labor;

(D) Direct travel;

(E) Other direct in-house costs; and

(F) Properly allocable and allowable indirect costs, as shown in the records maintained by the Contractor for purposes of obtaining reimbursement under Government contracts; and

(iii) The amount of financing payments that have been paid by cash, check, or other forms of payment to subcontractors.

(2) Accrued costs of Contractor contributions under employee pension plans shall be excluded until actually paid unless--

(i) The Contractor's practice is to make contributions to the retirement fund quarterly or more frequently; and

(ii) The contribution does not remain unpaid 30 days after the end of the applicable quarter or shorter payment period (any contribution remaining unpaid shall be excluded from the Contractor's indirect costs for payment purposes).

(3) Notwithstanding the audit and adjustment of invoices or vouchers under paragraph (g) of this clause, allowable indirect costs under this contract shall be obtained by applying indirect cost rates established in accordance with paragraph (d) of this clause.

(4) Any statements in specifications or other documents incorporated in this contract by reference designating performance of services or furnishing of materials at the Contractor's expense or at no cost to the Government shall be disregarded for purposes of cost-reimbursement under this clause.

(c) Small business concerns. A small business concern may receive more frequent payments than every 2 weeks.

(d) Final indirect cost rates. (1) Final annual indirect cost rates and the appropriate bases shall be established in accordance with Subpart 42.7 of the Federal Acquisition Regulation (FAR) in effect for the period covered by the indirect cost rate proposal.

(2)(i) The Contractor shall submit an adequate final indirect cost rate proposal to the Contracting Officer (or cognizant Federal agency official) and auditor within the 6-month period following the expiration of each of its fiscal years. Reasonable extensions, for exceptional circumstances only, may be requested in writing by the Contractor and granted in writing by the Contracting Officer. The Contractor shall support its proposal with adequate supporting data.

(ii) The proposed rates shall be based on the Contractor's actual cost experience for that period. The appropriate Government representative and the Contractor shall establish the final indirect cost rates as promptly as practical after receipt of the Contractor's proposal.

(iii) An adequate indirect cost rate proposal shall include the following data unless otherwise specified by the cognizant Federal agency official:

(A) Summary of all claimed indirect expense rates, including pool, base, and calculated indirect rate.

(B) General and Administrative expenses (final indirect cost pool). Schedule of claimed expenses by element of cost as identified in accounting records (Chart of Accounts).

(C) Overhead expenses (final indirect cost pool). Schedule of claimed expenses by element of cost as identified in accounting records (Chart of Accounts) for each final indirect cost pool.

(D) Occupancy expenses (intermediate indirect cost pool). Schedule of claimed expenses by element of cost as identified in accounting records (Chart of Accounts) and expense reallocation to final indirect cost pools.

(E) Claimed allocation bases, by element of cost, used to distribute indirect costs.

(F) Facilities capital cost of money factors computation.

(G) Reconciliation of books of account (i.e., General Ledger) and claimed direct costs by major cost element.

(H) Schedule of direct costs by contract and subcontract and indirect expense applied at claimed rates, as well as a subsidiary schedule of Government participation percentages in each of the allocation base amounts.

- (I) Schedule of cumulative direct and indirect costs claimed and billed by contract and subcontract.
 - (J) Subcontract information. Listing of subcontracts awarded to companies for which the contractor is the prime or upper-tier contractor (include prime and subcontract numbers; subcontract value and award type; amount claimed during the fiscal year; and the subcontractor name, address, and point of contact information).
 - (K) Summary of each time-and-materials and labor-hour contract information, including labor categories, labor rates, hours, and amounts; direct materials; other direct costs; and, indirect expense applied at claimed rates.
 - (L) Reconciliation of total payroll per IRS form 941 to total labor costs distribution.
 - (M) Listing of decisions/agreements/approvals and description of accounting/organizational changes.
 - (N) Certificate of final indirect costs (see 52.242-4, Certification of Final Indirect Costs).
 - (O) Contract closing information for contracts physically completed in this fiscal year (include contract number, period of performance, contract ceiling amounts, contract fee computations, level of effort, and indicate if the contract is ready to close).
- (iv) The following supplemental information is not required to determine if a proposal is adequate, but may be required during the audit process:
- (A) Comparative analysis of indirect expense pools detailed by account to prior fiscal year and budgetary data.
 - (B) General Organizational information and Executive compensation for the five most highly compensated executives. See 31.205-6(p). Additional salary reference information is available at http://www.whitehouse.gov/omb/procurement_index_exec_comp/.
 - (C) Identification of prime contracts under which the contractor performs as a subcontractor.
 - (D) Description of accounting system (excludes contractors required to submit a CAS Disclosure Statement or contractors where the description of the accounting system has not changed from the previous year's submission).
 - (E) Procedures for identifying and excluding unallowable costs from the costs claimed and billed (excludes contractors where the procedures have not changed from the previous year's submission).
 - (F) Certified financial statements and other financial data (e.g., trial balance, compilation, review, etc.).
 - (G) Management letter from outside CPAs concerning any internal control weaknesses.
 - (H) Actions that have been and/or will be implemented to correct the weaknesses described in the management letter from subparagraph G) of this section.
 - (I) List of all internal audit reports issued since the last disclosure of internal audit reports to the Government.
 - (J) Annual internal audit plan of scheduled audits to be performed in the fiscal year when the final indirect cost rate submission is made.
 - (K) Federal and State income tax returns.
 - (L) Securities and Exchange Commission 10-K annual report.

(M) Minutes from board of directors meetings.

(N) Listing of delay claims and termination claims submitted which contain costs relating to the subject fiscal year.

(O) Contract briefings, which generally include a synopsis of all pertinent contract provisions, such as: Contract type, contract amount, product or service(s) to be provided, contract performance period, rate ceilings, advance approval requirements, pre-contract cost allowability limitations, and billing limitations.

(v) The Contractor shall update the billings on all contracts to reflect the final settled rates and update the schedule of cumulative direct and indirect costs claimed and billed, as required in paragraph (d)(2)(iii)(I) of this section, within 60 days after settlement of final indirect cost rates.

(3) The Contractor and the appropriate Government representative shall execute a written understanding setting forth the final indirect cost rates. The understanding shall specify (i) the agreed-upon final annual indirect cost rates, (ii) the bases to which the rates apply, (iii) the periods for which the rates apply, (iv) any specific indirect cost items treated as direct costs in the settlement, and (v) the affected contract and/or subcontract, identifying any with advance agreements or special terms and the applicable rates. The understanding shall not change any monetary ceiling, contract obligation, or specific cost allowance or disallowance provided for in this contract. The understanding is incorporated into this contract upon execution.

(4) Failure by the parties to agree on a final annual indirect cost rate shall be a dispute within the meaning of the Disputes clause.

(5) Within 120 days (or longer period if approved in writing by the Contracting Officer) after settlement of the final annual indirect cost rates for all years of a physically complete contract, the Contractor shall submit a completion invoice or voucher to reflect the settled amounts and rates. The completion invoice or voucher shall include settled subcontract amounts and rates. The prime contractor is responsible for settling subcontractor amounts and rates included in the completion invoice or voucher and providing status of subcontractor audits to the contracting officer upon request.

(6)(i) If the Contractor fails to submit a completion invoice or voucher within the time specified in paragraph (d)(5) of this clause, the Contracting Officer may--

(A) Determine the amounts due to the Contractor under the contract; and

(B) Record this determination in a unilateral modification to the contract.

(ii) This determination constitutes the final decision of the Contracting Officer in accordance with the Disputes clause.

(e) Billing rates. Until final annual indirect cost rates are established for any period, the Government shall reimburse the Contractor at billing rates established by the Contracting Officer or by an authorized representative (the cognizant auditor), subject to adjustment when the final rates are established. These billing rates--

(1) Shall be the anticipated final rates; and

(2) May be prospectively or retroactively revised by mutual agreement, at either party's request, to prevent substantial overpayment or underpayment.

(f) Quick-closeout procedures. Quick-closeout procedures are applicable when the conditions in FAR 42.708(a) are satisfied.

(g) Audit. At any time or times before final payment, the Contracting Officer may have the Contractor's invoices or vouchers and statements of cost audited. Any payment may be (1) Reduced by amounts found by the Contracting Officer not to constitute allowable costs or (2) Adjusted for prior overpayments or underpayments.

(h) Final payment. (1) Upon approval of a completion invoice or voucher submitted by the Contractor in accordance with paragraph (d)(4) of this clause, and upon the Contractor's compliance with all terms of this contract, the Government shall promptly pay any balance of allowable costs and that part of the fee (if any) not previously paid.

(2) The Contractor shall pay to the Government any refunds, rebates, credits, or other amounts (including interest, if any) accruing to or received by the Contractor or any assignee under this contract, to the extent that those amounts are properly allocable to costs for which the Contractor has been reimbursed by the Government. Reasonable expenses incurred by the Contractor for securing refunds, rebates, credits, or other amounts shall be allowable costs if approved by the Contracting Officer. Before final payment under this contract, the Contractor and each assignee whose assignment is in effect at the time of final payment shall execute and deliver--

(i) An assignment to the Government, in form and substance satisfactory to the Contracting Officer, of refunds, rebates, credits, or other amounts (including interest, if any) properly allocable to costs for which the Contractor has been reimbursed by the Government under this contract; and

(ii) A release discharging the Government, its officers, agents, and employees from all liabilities, obligations, and claims arising out of or under this contract, except--

(A) Specified claims stated in exact amounts, or in estimated amounts when the exact amounts are not known;

(B) Claims (including reasonable incidental expenses) based upon liabilities of the Contractor to third parties arising out of the performance of this contract; provided, that the claims are not known to the Contractor on the date of the execution of the release, and that the Contractor gives notice of the claims in writing to the Contracting Officer within 6 years following the release date or notice of final payment date, whichever is earlier; and

(C) Claims for reimbursement of costs, including reasonable incidental expenses, incurred by the Contractor under the patent clauses of this contract, excluding, however, any expenses arising from the Contractor's indemnification of the Government against patent liability.

(End of clause)

52.222-2 PAYMENT FOR OVERTIME PREMIUMS (JUL 1990)

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed \$0.00 or the overtime premium is paid for work --

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdowns of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall--

(1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with

present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

* Insert either "zero" or the dollar amount agreed to during negotiations. The inserted figure does not apply to the exceptions in paragraph (a)(1) through (a)(4) of the clause.

(End of clause)

52.232-18 AVAILABILITY OF FUNDS (APR 1984)

Funds are not presently available for this contract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.

(End of clause)

52.232-20 LIMITATION OF COST (APR 1984)

(a) The parties estimate that performance of this contract, exclusive of any fee, will not cost the Government more than (1) the estimated cost specified in the Schedule or, (2) if this is a cost-sharing contract, the Government's share of the estimated cost specified in the Schedule. The Contractor agrees to use its best efforts to perform the work specified in the Schedule and all obligations under this contract within the estimated cost, which, if this is a cost-sharing contract, includes both the Government's and the Contractor's share of the cost.

(b) The Contractor shall notify the Contracting Officer in writing whenever it has reason to believe that--

(1) The costs the Contractor expects to incur under this contract in the next 60 days, when added to all costs previously incurred, will exceed 75 percent of the estimated cost specified in the Schedule; or

(2) The total cost for the performance of this contract, exclusive of any fee, will be either greater or substantially less than had been previously estimated.

(c) As part of the notification, the Contractor shall provide the Contracting Officer a revised estimate of the total cost of performing this contract.

(d) Except as required by other provisions of this contract, specifically citing and stated to be an exception to this clause--

(1) The Government is not obligated to reimburse the Contractor for costs incurred in excess of (i) the estimated cost specified in the Schedule or, (ii) if this is a cost-sharing contract, the estimated cost to the Government specified in the Schedule; and

(2) The Contractor is not obligated to continue performance under this contract (including actions under the Termination clause of this contract) or otherwise incur costs in excess of the estimated cost specified in the Schedule, until the Contracting Officer (i) notifies the Contractor in writing that the estimated cost has been increased and (ii) provides a revised estimated total cost of performing this contract. If this is a cost-sharing contract, the increase shall be allocated in accordance with the formula specified in the Schedule.

(e) No notice, communication, or representation in any form other than that specified in subparagraph (d)(2) above, or from any person other than the Contracting Officer, shall affect this contract's estimated cost to the Government. In the absence of the specified notice, the Government is not obligated to reimburse the Contractor for any costs in excess of the estimated cost or, if this is a cost-sharing contract, for any costs in excess of the estimated cost to the Government specified in the Schedule, whether those excess costs were incurred during the course of the contract or as a result of termination.

(f) If the estimated cost specified in the Schedule is increased, any costs the Contractor incurs before the increase that are in excess of the previously estimated cost shall be allowable to the same extent as if incurred afterward, unless the Contracting Officer issues a termination or other notice directing that the increase is solely to cover termination or other specified expenses.

(g) Change orders shall not be considered an authorization to exceed the estimated cost to the Government specified in the Schedule, unless they contain a statement increasing the estimated cost.

(h) If this contract is terminated or the estimated cost is not increased, the Government and the Contractor shall negotiate an equitable distribution of all property produced or purchased under the contract, based upon the share of costs incurred by each.

(End of clause)

52.243-7 NOTIFICATION OF CHANGES (APR 1984)

(a) Definitions.

"Contracting Officer," as used in this clause, does not include any representative of the Contracting Officer.

"Specifically authorized representative (SAR)," as used in this clause, means any person the Contracting Officer has so designated by written notice (a copy of which shall be provided to the Contractor) which shall refer to this subparagraph and shall be issued to the designated representative before the SAR exercises such authority.

(b) Notice. The primary purpose of this clause is to obtain prompt reporting of Government conduct that the Contractor considers to constitute a change to this contract. Except for changes identified as such in writing and signed by the Contracting Officer, the Contractor shall notify the Administrative Contracting Officer in writing, within 7 calendar days from the date that the Contractor identifies any Government conduct (including actions, inactions, and written or oral communications) that the Contractor regards as a change to the contract terms and conditions. On the basis of the most accurate information available to the Contractor, the notice shall state--

- (1) The date, nature, and circumstances of the conduct regarded as a change;
- (2) The name, function, and activity of each Government individual and Contractor official or employee involved in or knowledgeable about such conduct;
- (3) The identification of any documents and the substance of any oral communication involved in such conduct;
- (4) In the instance of alleged acceleration of scheduled performance or delivery, the basis upon which it arose;

(5) The particular elements of contract performance for which the Contractor may seek an equitable adjustment under this clause, including--

(i) What contract line items have been or may be affected by the alleged change;

(ii) What labor or materials or both have been or may be added, deleted, or wasted by the alleged change;

(iii) To the extent practicable, what delay and disruption in the manner and sequence of performance and effect on continued performance have been or may be caused by the alleged change;

(iv) What adjustments to contract price, delivery schedule, and other provisions affected by the alleged change are estimated; and

(6) The Contractor's estimate of the time by which the Government must respond to the Contractor's notice to minimize cost, delay or disruption of performance.

(c) Continued performance. Following submission of the notice required by (b) above, the Contractor shall diligently continue performance of this contract to the maximum extent possible in accordance with its terms and conditions as construed by the Contractor, unless the notice reports a direction of the Contracting Officer or a communication from a SAR of the Contracting Officer, in either of which events the Contractor shall continue performance; provided, however, that if the Contractor regards the direction or communication as a change as described in (b) above, notice shall be given in the manner provided. All directions, communications, interpretations, orders and similar actions of the SAR shall be reduced to writing and copies furnished to the Contractor and to the Contracting Officer. The Contracting Officer shall countermand any action which exceeds the authority of the SAR.

(d) Government response. The Contracting Officer shall promptly, within 15 calendar days after receipt of notice, respond to the notice in writing. In responding, the Contracting Officer shall either--

(1) Confirm that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance;

(2) Countermand any communication regarded as a change;

(3) Deny that the conduct of which the Contractor gave notice constitutes a change and when necessary direct the mode of further performance; or

(4) In the event the Contractor's notice information is inadequate to make a decision under (1), (2), or (3) above, advise the Contractor what additional information is required, and establish the date by which it should be furnished and the date thereafter by which the Government will respond.

(e) Equitable adjustments.

(1) If the Contracting Officer confirms that Government conduct effected a change as alleged by the Contractor, and the conduct causes an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether changed or not changed by such conduct, an equitable adjustment shall be made--

(i) In the contract price or delivery schedule or both; and

(ii) In such other provisions of the contract as may be affected.

(2) The contract shall be modified in writing accordingly. In the case of drawings, designs or specifications which are defective and for which the Government is responsible, the equitable adjustment shall include the cost and time

extension for delay reasonably incurred by the Contractor in attempting to comply with the defective drawings, designs or specifications before the Contractor identified, or reasonably should have identified, such defect. When the cost of property made obsolete or excess as a result of a change confirmed by the Contracting Officer under this clause is included in the equitable adjustment, the Contracting Officer shall have the right to prescribe the manner of disposition of the property. The equitable adjustment shall not include increased costs or time extensions for delay resulting from the Contractor's failure to provide notice or to continue performance as provided, respectively, in (b) and (c) above.

Note: The phrases "contract price" and "cost" wherever they appear in the clause, may be appropriately modified to apply to cost-reimbursement or incentive contracts, or to combinations thereof.

(End of clause)

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

Federal Acquisition Regulation:

<http://farsite.hill.af.mil/vffara.htm>

Defense Federal Acquisition Regulation:

<http://farsite.hill.af.mil/VDFDARA.HTM>

(End of clause)

252.227-7013 RIGHTS IN TECHNICAL DATA--NONCOMMERCIAL ITEMS. (SEP 2011)

(a) Definitions. As used in this clause--

(1) Computer data base means a collection of data recorded in a form capable of being processed by a computer. The term does not include computer software.

(2) Computer program means a set of instructions, rules, or routines recorded in a form that is capable of causing a computer to perform a specific operation or series of operations.

(3) Computer software means computer programs, source code, source code listings, object code listings, design details, algorithms, processes, flow charts, formulae and related material that would enable the software to be reproduced, recreated, or recompiled. Computer software does not include computer data bases or computer software documentation.

(4) Computer software documentation means owner's manuals, user's manuals, installation instructions, operating instructions, and other similar items, regardless of storage medium, that explain the capabilities of the computer software or provide instructions for using the software.

(5) Covered Government support contractor means a contractor under a contract, the primary purpose of which is to furnish independent and impartial advice or technical assistance directly to the Government in support of the Government's management and oversight of a program or effort (rather than to directly furnish an end item or service to accomplish a program or effort), provided that the contractor--

(i) Is not affiliated with the prime contractor or a first-tier subcontractor on the program or effort, or with any direct competitor of such prime contractor or any such first-tier subcontractor in furnishing end items or services of the type developed or produced on the program or effort; and

(ii) Receives access to technical data or computer software for performance of a Government contract that contains the clause at 252.227-7025, Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends.

(6) Detailed manufacturing or process data means technical data that describe the steps, sequences, and conditions of manufacturing, processing or assembly used by the manufacturer to produce an item or component or to perform a process.

(7) Developed means that an item, component, or process exists and is workable. Thus, the item or component must have been constructed or the process practiced. Workability is generally established when the item, component, or process has been analyzed or tested sufficiently to demonstrate to reasonable people skilled in the applicable art that there is a high probability that it will operate as intended. Whether, how much, and what type of analysis or testing is required to establish workability depends on the nature of the item, component, or process, and the state of the art. To be considered "developed," the item, component, or process need not be at the stage where it could be offered for sale or sold on the commercial market, nor must the item, component, or process be actually reduced to practice within the meaning of Title 35 of the United States Code.

(8) Developed exclusively at private expense means development was accomplished entirely with costs charged to indirect cost pools, costs not allocated to a government contract, or any combination thereof.

(i) Private expense determinations should be made at the lowest practicable level.

(ii) Under fixed-price contracts, when total costs are greater than the firm-fixed-price or ceiling price of the contract, the additional development costs necessary to complete development shall not be considered when determining whether development was at government, private, or mixed expense.

(9) Developed exclusively with government funds means development was not accomplished exclusively or partially at private expense.

(10) Developed with mixed funding means development was accomplished partially with costs charged to indirect cost pools and/or costs not allocated to a government contract, and partially with costs charged directly to a government contract.

(11) Form, fit, and function data means technical data that describes the required overall physical, functional, and performance characteristics (along with the qualification requirements, if applicable) of an item, component, or process to the extent necessary to permit identification of physically and functionally interchangeable items.

(12) Government purpose means any activity in which the United States Government is a party, including cooperative agreements with international or multi-national defense organizations, or sales or transfers by the United States Government to foreign governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data for commercial purposes or authorize others to do so.

(13) Government purpose rights means the rights to--

(i) Use, modify, reproduce, release, perform, display, or disclose technical data within the Government without restriction; and

(ii) Release or disclose technical data outside the Government and authorize persons to whom release or disclosure has been made to use, modify, reproduce, release, perform, display, or disclose that data for United States government purposes.

(14) Limited rights means the rights to use, modify, reproduce, release, perform, display, or disclose technical data, in whole or in part, within the Government. The Government may not, without the written permission of the party asserting limited rights, release or disclose the technical data outside the Government, use the technical data for manufacture, or authorize the technical data to be used by another party, except that the Government may reproduce, release, or disclose such data or authorize the use or reproduction of the data by persons outside the Government if--

(i) The reproduction, release, disclosure, or use is--

(A) Necessary for emergency repair and overhaul; or

(B) A release or disclosure to--

(1) A covered Government support contractor, for use, modification, reproduction, performance, display, or release or disclosure to authorized person(s) in performance of a Government contract; or

(2) A foreign government, of technical data other than detailed manufacturing or process data, when use of such data by the foreign government is in the interest of the Government and is required for evaluational or informational purposes;

(ii) The recipient of the technical data is subject to a prohibition on the further reproduction, release, disclosure, or use of the technical data; and

(iii) The contractor or subcontractor asserting the restriction is notified of such reproduction, release, disclosure, or use.

(15) Technical data means recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation). The term does not include computer software or data incidental to contract administration, such as financial and/or management information.

(16) Unlimited rights means rights to use, modify, reproduce, perform, display, release, or disclose technical data in whole or in part, in any manner, and for any purpose whatsoever, and to have or authorize others to do so.

(b) Rights in technical data. The Contractor grants or shall obtain for the Government the following royalty free, world-wide, nonexclusive, irrevocable license rights in technical data other than computer software documentation (see the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause of this contract for rights in computer software documentation):

(1) Unlimited rights.

The Government shall have unlimited rights in technical data that are--

(i) Data pertaining to an item, component, or process which has been or will be developed exclusively with Government funds;

(ii) Studies, analyses, test data, or similar data produced for this contract, when the study, analysis, test, or similar work was specified as an element of performance;

(iii) Created exclusively with Government funds in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes;

(iv) Form, fit, and function data;

(v) Necessary for installation, operation, maintenance, or training purposes (other than detailed manufacturing or process data);

(vi) Corrections or changes to technical data furnished to the Contractor by the Government;

(vii) Otherwise publicly available or have been released or disclosed by the Contractor or subcontractor without restrictions on further use, release or disclosure, other than a release or disclosure resulting from the sale, transfer, or other assignment of interest in the technical data to another party or the sale or transfer of some or all of a business entity or its assets to another party;

(viii) Data in which the Government has obtained unlimited rights under another Government contract or as a result of negotiations; or

(ix) Data furnished to the Government, under this or any other Government contract or subcontract thereunder, with-

(A) Government purpose license rights or limited rights and the restrictive condition(s) has/have expired; or

(B) Government purpose rights and the Contractor's exclusive right to use such data for commercial purposes has expired.

(2) Government purpose rights.

(i) The Government shall have government purpose rights for a five-year period, or such other period as may be negotiated, in technical data--

(A) That pertain to items, components, or processes developed with mixed funding except when the Government is entitled to unlimited rights in such data as provided in paragraphs (b)(ii) and (b)(iv) through (b)(ix) of this clause; or

(B) Created with mixed funding in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The five-year period, or such other period as may have been negotiated, shall commence upon execution of the contract, subcontract, letter contract (or similar contractual instrument), contract modification, or option exercise that required development of the items, components, or processes or creation of the data described in paragraph (b)(2)(i)(B) of this clause. Upon expiration of the five-year or other negotiated period, the Government shall have unlimited rights in the technical data.

(iii) The Government shall not release or disclose technical data in which it has government purpose rights unless-

(A) Prior to release or disclosure, the intended recipient is subject to the non-disclosure agreement at 227.7103-7 of the Defense Federal Acquisition Regulation Supplement (DFARS); or

(B) The recipient is a Government contractor receiving access to the data for performance of a Government contract that contains the clause at DFARS 252.227-7025, Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends.

(iv) The Contractor has the exclusive right, including the right to license others, to use technical data in which the Government has obtained government purpose rights under this contract for any commercial purpose during the time period specified in the government purpose rights legend prescribed in paragraph (f)(2) of this clause.

(3) Limited rights.

(i) Except as provided in paragraphs (b)(1)(ii) and (b)(1)(iv) through (b)(1)(ix) of this clause, the Government shall have limited rights in technical data--

(A) Pertaining to items, components, or processes developed exclusively at private expense and marked with the limited rights legend prescribed in paragraph (f) of this clause; or

(B) Created exclusively at private expense in the performance of a contract that does not require the development, manufacture, construction, or production of items, components, or processes.

(ii) The Government shall require a recipient of limited rights data for emergency repair or overhaul to destroy the data and all copies in its possession promptly following completion of the emergency repair/overhaul and to notify the Contractor that the data have been destroyed.

(iii) The Contractor, its subcontractors, and suppliers are not required to provide the Government additional rights to use, modify, reproduce, release, perform, display, or disclose technical data furnished to the Government with limited rights. However, if the Government desires to obtain additional rights in technical data in which it has limited rights, the Contractor agrees to promptly enter into negotiations with the Contracting Officer to determine whether there are acceptable terms for transferring such rights. All technical data in which the Contractor has granted the Government additional rights shall be listed or described in a license agreement made part of the contract. The license shall enumerate the additional rights granted the Government in such data.

(iv) The Contractor acknowledges that--

(A) Limited rights data is authorized to be released or disclosed to covered Government support contractors;

(B) The Contractor will be notified of such release or disclosure;

(C) The Contractor (or the party asserting restrictions as identified in the limited rights legend) may require each such covered Government support contractor to enter into a non-disclosure agreement directly with the Contractor (or the party asserting restrictions) regarding the covered Government support contractor's use of such data, or alternatively, that the Contractor (or party asserting restrictions) may waive in writing the requirement for a non-disclosure agreement;

(D) Any such non-disclosure agreement shall address the restrictions on the covered Government support contractor's use of the limited rights data as set forth in the clause at 252.227-7025, and shall not include any additional terms and conditions unless mutually agreed to by the parties to the non-disclosure agreement; and

(E) The Contractor shall provide a copy of any such non-disclosure agreement or waiver to the Contracting Officer, upon request.

(4) Specifically negotiated license rights.

The standard license rights granted to the Government under paragraphs (b)(1) through (b)(3) of this clause, including the period during which the Government shall have government purpose rights in technical data, may be modified by mutual agreement to provide such rights as the parties consider appropriate but shall not provide the Government lesser rights than are enumerated in paragraph (a)(13) of this clause. Any rights so negotiated shall be identified in a license agreement made part of this contract.

(5) Prior government rights.

Technical data that will be delivered, furnished, or otherwise provided to the Government under this contract, in which the Government has previously obtained rights shall be delivered, furnished, or provided with the pre-existing rights, unless--

(i) The parties have agreed otherwise; or

(ii) Any restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose the data have expired or no longer apply.

(6) Release from liability.

The Contractor agrees to release the Government from liability for any release or disclosure of technical data made in accordance with paragraph (a)(13) or (b)(2)(iii) of this clause, in accordance with the terms of a license negotiated under paragraph (b)(4) of this clause, or by others to whom the recipient has released or disclosed the data and to seek relief solely from the party who has improperly used, modified, reproduced, released, performed, displayed, or disclosed Contractor data marked with restrictive legends.

(c) Contractor rights in technical data. All rights not granted to the Government are retained by the Contractor.

(d) Third party copyrighted data. The Contractor shall not, without the written approval of the Contracting Officer, incorporate any copyrighted data in the technical data to be delivered under this contract unless the Contractor is the copyright owner or has obtained for the Government the license rights necessary to perfect a license or licenses in the deliverable data of the appropriate scope set forth in paragraph (b) of this clause, and has affixed a statement of the license or licenses obtained on behalf of the Government and other persons to the data transmittal document.

(e) Identification and delivery of data to be furnished with restrictions on use, release, or disclosure. (1) This paragraph does not apply to restrictions based solely on copyright.

(2) Except as provided in paragraph (e)(3) of this clause, technical data that the Contractor asserts should be furnished to the Government with restrictions on use, release, or disclosure are identified in an attachment to this contract (the Attachment). The Contractor shall not deliver any data with restrictive markings unless the data are listed on the Attachment.

(3) In addition to the assertions made in the Attachment, other assertions may be identified after award when based on new information or inadvertent omissions unless the inadvertent omissions would have materially affected the source selection decision. Such identification and assertion shall be submitted to the Contracting Officer as soon as practicable prior to the scheduled date for delivery of the data, in the following format, and signed by an official authorized to contractually obligate the Contractor: Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data.

The Contractor asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data should be restricted--

Technical data to be Furnished With Restrictions \1/	Basis for Assertion \2/	Asserted Rights Category \3/	Name of Person Asserting Restrictions \4/
(LIST)	(LIST)	(LIST)	(LIST)

\1/ If the assertion is applicable to items, components or processes developed at private expense, identify both the data and each such items, component, or process.

\2/ Generally, the development of an item, component, or process at private expense, either exclusively or partially, is the only basis for asserting restrictions on the Government's rights to use, release, or disclose technical data

pertaining to such items, components, or processes. Indicate whether development was exclusively or partially at private expense. If development was not at private expense, enter the specific reason for asserting that the Government's rights should be restricted.

\3/ Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited or government purpose rights under this or a prior contract, or specifically negotiated licenses).

\4/ Corporation, individual, or other person, as appropriate.

Date _____

Printed Name and Title _____

Signature _____

(End of identification and assertion)

(4) When requested by the Contracting Officer, the Contractor shall provide sufficient information to enable the Contracting Officer to evaluate the Contractor's assertions. The Contracting Officer reserves the right to add the Contractor's assertions to the Attachment and validate any listed assertion, at a later date, in accordance with the procedures of the Validation of Restrictive Markings on Technical Data clause of this contract.

(f) Marking requirements. The Contractor, and its subcontractors or suppliers, may only assert restrictions on the Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data to be delivered under this contract by marking the deliverable data subject to restriction. Except as provided in paragraph (f)(5) of this clause, only the following legends are authorized under this contract: the government purpose rights legend at paragraph (f)(2) of this clause; the limited rights legend at paragraph (f)(3) of this clause; or the special license rights legend at paragraph (f)(4) of this clause; and/or a notice of copyright as prescribed under 17 U.S.C. 401 or 402.

(1) General marking instructions. The Contractor, or its subcontractors or suppliers, shall conspicuously and legibly mark the appropriate legend on all technical data that qualify for such markings. The authorized legends shall be placed on the transmittal document or storage container and, for printed material, each page of the printed material containing technical data for which restrictions are asserted. When only portions of a page of printed material are subject to the asserted restrictions, such portions shall be identified by circling, underscoring, with a note, or other appropriate identifier. Technical data transmitted directly from one computer or computer terminal to another shall contain a notice of asserted restrictions. Reproductions of technical data or any portions thereof subject to asserted restrictions shall also reproduce the asserted restrictions.

(2) Government purpose rights markings. Data delivered or otherwise furnished to the Government purpose rights shall be marked as follows:

Government Purpose Rights

Contract No. _____

Contractor Name _____

Contractor Address _____

Expiration Date _____

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(2) of the Rights in Technical Data--Noncommercial Items clause contained in the above identified contract. No restrictions apply after the expiration date shown above. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(3) Limited rights markings. Data delivered or otherwise furnished to the Government with limited rights shall be marked with the following legend:

Limited Rights

Contract No. _____

Contractor Name _____

Contractor Address _____

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these technical data are restricted by paragraph (b)(3) of the Rights in Technical Data--Noncommercial Items clause contained in the above identified contract. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings. Any person, other than the Government, who has been provided access to such data must promptly notify the above named Contractor.

(End of legend)

(4) Special license rights markings. (i) Data in which the Government's rights stem from a specifically negotiated license shall be marked with the following legend:

Special License Rights

The Government's rights to use, modify, reproduce, release, perform, display, or disclose these data are restricted by Contract No. _____ (Insert contract number) _____, License No. _____ (Insert license identifier) _____. Any reproduction of technical data or portions thereof marked with this legend must also reproduce the markings.

(End of legend)

(ii) For purposes of this clause, special licenses do not include government purpose license rights acquired under a prior contract (see paragraph (b)(5) of this clause).

(5) Pre-existing data markings. If the terms of a prior contract or license permitted the Contractor to restrict the Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data deliverable under this contract, and those restrictions are still applicable, the Contractor may mark such data with the appropriate restrictive legend for which the data qualified under the prior contract or license. The marking procedures in paragraph (f)(1) of this clause shall be followed.

(g) Contractor procedures and records. Throughout performance of this contract, the Contractor and its subcontractors or suppliers that will deliver technical data with other than unlimited rights, shall--

(1) Have, maintain, and follow written procedures sufficient to assure that restrictive markings are used only when authorized by the terms of this clause; and

(2) Maintain records sufficient to justify the validity of any restrictive markings on technical data delivered under this contract.

(h) Removal of unjustified and nonconforming markings. (1) Unjustified technical data markings. The rights and obligations of the parties regarding the validation of restrictive markings on technical data furnished or to be furnished under this contract are contained in the Validation of Restrictive Markings on Technical Data clause of this contract. Notwithstanding any provision of this contract concerning inspection and acceptance, the Government may ignore or, at the Contractor's expense, correct or strike a marking if, in accordance with the procedures in the Validation of Restrictive Markings on Technical Data clause of this contract, a restrictive marking is determined to be unjustified.

(2) Nonconforming technical data markings. A nonconforming marking is a marking placed on technical data delivered or otherwise furnished to the Government under this contract that is not in the format authorized by this contract. Correction of nonconforming markings is not subject to the validation of Restrictive Markings on Technical Data clause of this contract. If the Contracting Officer notifies the Contractor of a nonconforming marking and the Contractor fails to remove or correct such marking within sixty (60) days, the Government may ignore or, at the Contractor's expense, remove or correct any nonconforming marking.

(i) Relation to patents. Nothing contained in this clause shall imply a license to the Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Government under any patent.

(j) Limitation on charges for rights in technical data. (1) The Contractor shall not charge to this contract any cost, including, but not limited to, license fees, royalties, or similar charges, for rights in technical data to be delivered under this contract when--

(i) The Government has acquired, by any means, the same or greater rights in the data; or

(ii) The data are available to the public without restrictions.

(2) The limitation in paragraph (j)(1) of this clause--

(i) Includes costs charged by a subcontractor or supplier, at any tier, or costs incurred by the Contractor to acquire rights in subcontractor or supplier technical data, if the subcontractor or supplier has been paid for such rights under any other Government contract or under a license conveying the rights to the Government; and

(ii) Does not include the reasonable costs of reproducing, handling, or mailing the documents or other media in which the technical data will be delivered.

(k) Applicability to subcontractors or suppliers. (1) The Contractor shall ensure that the rights afforded its subcontractors and suppliers under 10 U.S.C. 2320, 10 U.S.C. 2321, and the identification, assertion, and delivery processes of paragraph (e) of this clause are recognized and protected.

(2) Whenever any technical data for noncommercial items, or for commercial items developed in any part at Government expense, is to be obtained from a subcontractor or supplier for delivery to the Government under this contract, the Contractor shall use this same clause in the subcontract or other contractual instrument, and require its subcontractors or suppliers to do so, without alteration, except to identify the parties. This clause will govern the technical data pertaining to noncommercial items or to any portion of a commercial item that was developed in any part at Government expense, and the clause at 252.227-7015 will govern the technical data pertaining to any portion of a commercial item that was developed exclusively at private expense. No other clause shall be used to enlarge or diminish the Government's, the Contractor's, or a higher-tier subcontractor's or supplier's rights in a subcontractor's or supplier's technical data.

(3) Technical data required to be delivered by a subcontractor or supplier shall normally be delivered to the next higher-tier contractor, subcontractor, or supplier. However, when there is a requirement in the prime contract for

data which may be submitted with other than unlimited rights by a subcontractor or supplier, then said subcontractor or supplier may fulfill its requirement by submitting such data directly to the Government, rather than through a higher-tier contractor, subcontractor, or supplier.

(4) The Contractor and higher-tier subcontractors or suppliers shall not use their power to award contracts as economic leverage to obtain rights in technical data from their subcontractors or suppliers. (5) In no event shall the Contractor use its obligation to recognize and protect subcontractor or supplier rights in technical data as an excuse for failing to satisfy its contractual obligations to the Government.

(End of clause)

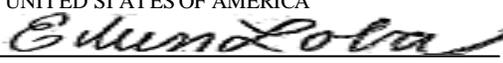
Section J - List of Documents, Exhibits and Other Attachments

ATTACHMENT 1: P-SPEC CLRF-IC
SEE ATTACHED FILE

ATTACHMENT 2: CDRL LIST
SEE ATTACHED FILE

ATTACHMENT 3: DD 254 FORM
SEE ATTACHED FILE

ATTACHMENT 4: COMP SUBCTR PLAN
SEE ATTACHED FILE

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1 3
2. AMENDMENT/MODIFICATION NO. P00001	3. EFFECTIVE DATE 04-Dec-2012	4. REQUISITION/PURCHASE REQ. NO. M9545012RCR2AC6		5. PROJECT NO.(If applicable)
6. ISSUED BY CODE COMMANDER, MARCORSSYSCOM ATTN: AMY ANOKYE 2200 LESTER STREET QUANTICO VA 22134	M67854	7. ADMINISTERED BY (If other than item 6) DCMA BOSTON 495 SUMMER ST. BOSTON MA 02210-2138		CODE S2206A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) OASYS TECHNOLOGY, LLC VADIM PLOTSKER 645 HARVEY RD STE 9 MANCHESTER NH 03103-7244			9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
			X	10A. MOD. OF CONTRACT/ORDER NO. M67854-13-C-6017
			X	10B. DATED (SEE ITEM 13) 23-Oct-2012
CODE 3VTS8	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: FAR 43.103(a)(3) by Mutual Agreement of Both Parties.				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: anokyea13697 The purpose of this modification is to: 1) Per DCMA, incorporate the following Property Administrative Clauses 52.245-9 (Use and Charges), 252.245-7001 (Tagging, Labeling and Marking of Government-Furnished Property), 252.245-7002 (Reporting loss of Government property) and 252.245-7004 (Reporting, Reutilization, and Disposal) 2) Change the Contracting Officer's (Eileen Loba) phone number from 703-432-3681 to 703-432-4023 and 3) Incorporate GFE Requirement Information as an attachment in Section J. All other terms and conditions remain unchanged.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) EILEEN Y LOBA / CONTRACTING OFFICER TEL: 703-432-3681 EMAIL: Eileen.loba@usmc.mil	
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY  (Signature of Contracting Officer)		16C. DATE SIGNED 14-Dec-2012

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

The following items are applicable to this modification:

SECTION I - CONTRACT CLAUSES

SUMMARY OF CHANGES

SECTION G - CONTRACT ADMINISTRATION DATA

The following have been modified:

GOVERNMENT POINTS OF CONTACT

Listed Below are the Government points of contact for this effort:

ROLE	NAME	ADDRESS	PHONE	EMAIL
Procuring Contracting Officer	Eileen Loba	MARCORSYSCOM 2200 Lester Street Quantico, VA 22134	(703) 432-4023	Eileen.loba@usmc.mil
Administrative Contracting Officer	Carl Morandus	DCMA Boston 2 Wall Street, Suite 203 Manchester, NH 03101	(603)621-2918	Carl.morandus@dcma.mil
Contracting Officer Representative	Bruce Leaman	MARCORSYSCOM PG-14 Armor Fire Support Systems (AFSS) 2200 Lester Street Quantico, VA 22134	(703)432-4054	Bruce.Leaman@usmc.mil
Payment Office	DFAS –Columbus Center C/O North Entitlement Operations	P.O. Box 182266 Columbus, OH 43218	(800) 756-4571	N/A

SECTION I - CONTRACT CLAUSES

The following have been added by reference:

52.245-9	Use And Charges	APR 2012
252.245-7001	Tagging, Labeling, and Marking of Government-Furnished Property	APR 2012
252.245-7002	Reporting Loss of Government Property	APR 2012
252.245-7004	Reporting, Reutilization, and Disposal	APR 2012

SECTION J - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

The following have been added by full text:

GFE INFORMATION FOR CLRF IC

Equipment and Services.

Government Furnished Equipment (GFE)/Government Furnished Information (GFI)/Government Furnished Material (GFM). The Management Control Activity (MCA) (Code P821B) shall coordinate GFE/GFM requests and maintain a central control system on all government assets in the Contractor's possession. The Contractor shall provide GFE requests to the MCA and appropriate Marine Corps System Command program office. The Contractor shall be notified of the availability of GFE. The Contractor shall be responsible for receipt, accountability, security, storage, and reporting requirements under those processes for the GFE provided. The Contractor is to acknowledge receipt of GFE/GFM to the MCA within 15 days of receipt. Contractor must register as a contractor receiver and shipper in Wide Area Workflow (WAWF) (see registration instructions in WAWF invoicing). Contractor shall return the GFE in the original condition as received. Any repairs required as a result of Contractor possession and use shall be borne by the Contractor at no cost to the Government. The Government must authorize any deviations. The GFE/GFI/GFM supplied by the Government can only be used for this contract unless approved by the Government.

Table II. GFE Requirements

TAMCN	Nomenclature (UUT)	NSN	Part Number	PM Office	QTY
E10487B	AN/PEQ-21B VECTOR COMMON LASER RANGE FINDER (CLRF)	1240-01-561-5149		PM 14	1
E00017G	AN/PAS-25 Thermal Laser Spot Imager (TLSI)	5855-01-562-9999	48150000-1	PM 14	1
E00427B	AN/PEQ-17 Portable Lightweight Designator Rangefinder (PLDR)	1240-01-566-6510	48080000-1	PM 14	1
E01177B	Joint Terminal Attack Controller Laser Target Designator (JTAC LTD)	1260-01-596-1264	48400000-1	PM 14	1
E19787G	AN/PAS-22 Long Range Thermal Imager (LRTI)	5855-01-536-3532 Preferred	48050000-1	PM 13	1
		5855-14-521-9283 Standard	56094176AA		
E00127G	AN/PAS-28 Medium Range Thermal Bi-ocular (MRTB)	5855-01-573-2483 Preferred	36-50-911-002	PM 13	1
		5855-01-535-0971 Standard	6620481-1		

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. P00002	3. EFFECTIVE DATE 19-Dec-2012	4. REQUISITION/PURCHASE REQ. NO. M9545012RCR2AC6		5. PROJECT NO.(If applicable)	
6. ISSUED BY MARINE CORPS SYSTEMS COMMAND-CT026 ATTN:EILEEN.LOBA@USMC.MIL 2200 LESTER STREET QUANTICO VA 22134	CODE M67854	7. ADMINISTERED BY (If other than item 6) DCMA BOSTON 495 SUMMER ST. BOSTON MA 02210-2138		CODE S2206A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) OASYS TECHNOLOGY, LLC VADIM PLOTSKER 645 HARVEY RD STE 9 MANCHESTER NH 03103-7244			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. M67854-13-C-6017	
			X	10B. DATED (SEE ITEM 13) 23-Oct-2012	
CODE 3VTS8	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: lobae131015 This modification verifies the CDRL Distribution List (as discussed at Post Award Conference) and corrects CDRL paragraph numbering to Block 5 (from A00L - A00S). See section J Attachment. All other terms and conditions remain unchanged.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) EILEEN Y LOBA / CONTRACTING OFFICER TEL: 703-432-3681 EMAIL: Eileen.loba@usmc.mil		
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Eileen Loba</i> (Signature of Contracting Officer)		16C. DATE SIGNED 19-Dec-2012	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION J - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

The following have been added by full text:

MODIFICATION P00002 CDRLS

Contract Modification P00002:

CDRL DISTRIBUTION LIST:

BAE-OASYS (6017):

Eileen Loba- eileen.loba@usmc.mil (Contracting Officer)

Bruce Leaman: bruce.leaman@usmc.mil (COR)

Maj Matthew Clinger: matthew.b.clinger@usmc.mil (Team Lead)

Chuck Romito: chuck.romito@urs.com (Program Analyst)

CDRL/SOW CHANGES:

CDRL #	CORRECTED PARAGRAPH REFERENCE NUMBER TO BLOCK 5
A00L	3.5.3
A00M	3.5.4
A00N	3.5.5
A00P	3.5.6
A00Q	3.5.7
A00R	3.5.8
A00S	3.5.9

End of Modification P00002

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE U	PAGE OF PAGES 1 2
2. AMENDMENT/MODIFICATION NO. P00003		3. EFFECTIVE DATE 07-Jan-2013	4. REQUISITION/PURCHASE REQ. NO. M9545012RCR2AC6		5. PROJECT NO.(If applicable)
6. ISSUED BY MARINE CORPS SYSTEMS COMMAND-CT026 ATTN:EILEEN.LOBA@USMC.MIL 2200 LESTER STREET QUANTICO VA 22134		CODE M67854	7. ADMINISTERED BY (If other than item 6) DCMA BOSTON 495 SUMMER ST. BOSTON MA 02210-2138		CODE S2206A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) OASYS TECHNOLOGY, LLC VADIM PLOTSKER 645 HARVEY RD STE 9 MANCHESTER NH 03103-7244				9A. AMENDMENT OF SOLICITATION NO.	
				9B. DATED (SEE ITEM 11)	
				X 10A. MOD. OF CONTRACT/ORDER NO. M67854-13-C-6017	
				X 10B. DATED (SEE ITEM 13) 23-Oct-2012	
CODE 3VTS8		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
X B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: lobae131130 THIS MODIFICATION PROVIDES ADDED IDENTIFYING INFORMATION FOR INVOICE PROCESSING IN SECTION G. ALL TERMS AND CONDITIONS REMAIN UNCHANGED AND IN FULL FORCE.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) EILEEN Y LOBA / CONTRACTING OFFICER TEL: 703-432-3681 EMAIL: Eileen.loba@usmc.mil		
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Eileen Loba</i> (Signature of Contracting Officer)		16C. DATE SIGNED 07-Jan-2013

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION G - CONTRACT ADMINISTRATION DATA

The following have been added by full text:

MOD P00003

Please provide the following additional information

Service Approver DoDAAC: M67854 Extension: PG 14

Therefore, all invoices will require the following:

Pay Official DoDAAC	HQ0337
Issue By DoDAAC	M67854
Admin DoDAAC	S2206A
Inspect By DoDAAC	M67854
Service Approver DoDAAC: M67854 Extension: PG 14	
DCAA Auditor DoDAAC	HAA813

END OF MOD P00003

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE U	PAGE OF PAGES 1 3
2. AMENDMENT/MODIFICATION NO. P00004		3. EFFECTIVE DATE 05-Feb-2013	4. REQUISITION/PURCHASE REQ. NO. M9545012RCR2AC6		5. PROJECT NO.(If applicable)
6. ISSUED BY MARINE CORPS SYSTEMS COMMAND-CT026 ATTN:EILEEN.LOBA@USMC.MIL 2200 LESTER STREET QUANTICO VA 22134		CODE M67854	7. ADMINISTERED BY (If other than item 6) DCMA BOSTON 495 SUMMER ST. BOSTON MA 02210-2138		CODE S2206A
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) OASYS TECHNOLOGY, LLC VADIM PLOTSKER 645 HARVEY RD STE 9 MANCHESTER NH 03103-7244				9A. AMENDMENT OF SOLICITATION NO.	
				9B. DATED (SEE ITEM 11)	
				X 10A. MOD. OF CONTRACT/ORDER NO. M67854-13-C-6017	
				X 10B. DATED (SEE ITEM 13) 23-Oct-2012	
CODE 3VTS8		FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: by mutual agreement of both parties					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: lobae131497 This purpose of this modification is to provide additional instruction and guidance pertaining to Government Furnished Equipment (GFE), Information (GFI), and Material (GFM). This information is found in Section G of this contract. All other terms and conditions remain unchanged.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) EILEEN Y LOBA / CONTRACTING OFFICER TEL: 703-432-3681 EMAIL: Eileen.loba@usmc.mil		
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY <i>Eileen Loba</i> (Signature of Contracting Officer)		16C. DATE SIGNED 07-Feb-2013
(Signature of person authorized to sign)					

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION E - INSPECTION AND ACCEPTANCE

The following have been added by reference:

252.246-7000 Material Inspection And Receiving Report MAR 2008

SECTION G - CONTRACT ADMINISTRATION DATA

The following have been added by full text:

GFE INFORMATION FOR CLRF-IC

GFE INFORMATION FOR CLRF IC CONTRACT MOD (BAE OASYS)

Equipment and Services.Government Furnished Equipment (GFE)/Government Furnished Information

(GFI)/Government Furnished Material (GFM). The Management Control Activity (MCA) (Code P821B) shall coordinate GFE/GFM requests and maintain a central control system on all government assets in the Contractor's possession. The Contractor shall provide GFE requests to the MCA and appropriate Marine Corps System Command program office. The Contractor shall be notified of the availability of GFE. The Contractor shall be responsible for receipt, accountability, security, storage, and reporting requirements under those processes for the GFE provided. The Contractor is to acknowledge receipt of GFE/GFM to the MCA within 15 days of receipt. Contractor must register as a contractor receiver and shipper in Wide Area Workflow (WAWF) (see registration instructions in WAWF invoicing). Contractor shall return the GFE in the original condition as received. Any repairs required as a result of Contractor possession and use shall be born by the Contractor at no cost to the Government. The Government must authorize any deviations. The GFE/GFI/GFM supplied by the Government can only be used for this contract unless approved by the Government.

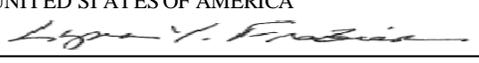
Per OPNAVINST 2221.5c, paragraph 8, Approval: COMNAVNETWARCOM shall review each request received to ensure that all the requirements of the national policy for release of COMSEC material to U.S. industrial firms are fulfilled; approve the release from a national policy aspect; and advise appropriate commands and the DIRNSA of the approval so that other required action can be initiated.

Table II. GFE Requirements

TAMCN	Nomenclature (UUT)	NSN	Part Number	PM Office	QTY
A8023	AN CYZ 10 V3	5810-01-393- 1973	10254A	MC3	2
A8023	AN PYQ 10 C Simple Key Loader	5810-01-517- 3587	11866A	MC3	1

END OF MODIFICATION 4

(End of Summary of Changes)

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE U	PAGE OF PAGES 1 2	
2. AMENDMENT/MODIFICATION NO. P00005	3. EFFECTIVE DATE 19-Mar-2013	4. REQUISITION/PURCHASE REQ. NO. M9545012RCR2AC6		5. PROJECT NO.(If applicable)	
6. ISSUED BY MARINE CORPS SYSTEMS COMMAND-CT026 ATTN:ELIANA.YORK@USMC.MIL 2200 LESTER STREET QUANTICO VA 22134	CODE M67854	7. ADMINISTERED BY (If other than item 6) DCMA BOSTON 495 SUMMER ST. BOSTON MA 02210-2138		CODE S2206A	
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code) OASYS TECHNOLOGY, LLC VADIM PLOTSKER 645 HARVEY RD STE 9 MANCHESTER NH 03103-7244			9A. AMENDMENT OF SOLICITATION NO.		
			9B. DATED (SEE ITEM 11)		
			X	10A. MOD. OF CONTRACT/ORDER NO. M67854-13-C-6017	
			X	10B. DATED (SEE ITEM 13) 23-Oct-2012	
CODE 3VTS8	FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS					
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
X	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) Modification Control Number: yorke131978 Purpose of this modification is to revise the Government Procurement Contracting Officer data in Section G and also to update Attachment #3 Security Classification Guide to version dated 1 March 2013 in Section J.					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) LYNN FRAZIER / CONTRACTING OFFICER TEL: 703-432-3575/5017 EMAIL: lynn.frazier@usmc.mil		
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY 		16C. DATE SIGNED 20-Mar-2013	
(Signature of person authorized to sign)		(Signature of Contracting Officer)			

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION G - CONTRACT ADMINISTRATION DATA

The following have been modified:

GOVERNMENT POINTS OF CONTACT

Listed Below are the Government points of contact for this effort:

ROLE	NAME	ADDRESS	PHONE	EMAIL
Procuring Contracting Officer	Lynn Frazier	MARCORSYSCOM 2200 Lester Street Quantico, VA 22134	(703) 432-4072	Lynn.frazier@usmc.mil
Administrative Contracting Officer	Carl Morandus	DCMA Boston 2 Wall Street, Suite 203 Manchester, NH 03101	(603)621-2918	Carl.morandus@dcma.mil
Contracting Officer Representative	Bruce Leaman	MARCORSYSCOM PG-14 Armor Fire Support Systems (AFSS) 2200 Lester Street Quantico, VA 22134	(703)432-4054	Bruce.Leaman@usmc.mil
Payment Office	DFAS –Columbus Center C/O North Entitlement Operations	P.O. Box 182266 Columbus, OH 43218	(800) 756-4571	N/A

SECTION J - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

The following have been modified:

ATTACHMENT 3: DD 254 FORM

SEE ATTACHED FILE with revised DD254 Form dated 03 March 2013

(End of Summary of Changes)



UNITED STATES MARINE CORPS
MARINE CORPS SYSTEMS COMMAND
2200 LESTER STREET
QUANTICO, VIRGINIA 22134-5010

IN REPLY REFER TO:

5720
LAWQ
MCSC2013F040100
5 May 13

David, Brody & Dondershine, LLP
Mr. Thomas David
12355 Sunrise Valley Drive
Reston VA 20191

SUBJECT: FOIA - FILE MCSC2013F040101

Dear Mr. David:

This responds to your Freedom of Information Act (FOIA) Request of November 6, 2012, received in this office on April 23, 2013, which requests a copy of contract M67854-13-C-6019.

Please find enclosed a copy of the previously released documents.

Pursuant to Executive Order 12,600 request, the submitter provided the Marine Corps Systems Command with proposed redactions pursuant to 5 U.S.C. § 552 (b)(3) and 5 U.S.C. § 552 (b)(4).

The submitter asserts that attachments 3 and 4 are exempt from disclosure in their entirety pursuant to FOIA Exemptions 5 U.S.C. § 552(b)(3) and 5 U.S.C. § 552(b)(4). Specifically, 5 U.S.C. § 552(b)(3) precludes disclosure of a submitter's information if disclosure is prohibited by another statute. It is important to note that the Competition In Contracting Act of 1984 (CICA) and 10 U.S.C. § 2305(g), preclude the release of proposals. In fact, CICA provides that "a proposal in the possession or control of [a military department] may not be made available to any person under section 552 of title 5." Id.

Additionally, the Trade Secrets Act, 18 U.S.C.A. § 1905 (West Supp. 1999) ("TSA"), also precludes release of the requested proposals. Under this statute, officers and employees of the United States or any U.S. agency or department, are prohibited from divulging or disclosing information that relates to trade secrets, operations, style of work, confidential data, amount or source of income, profits, or expenditures.

FOIA Exemption 5 U.S.C. § 552(b)(4) exempts from disclosure (i) voluntarily submitted commercial or financial information provided that the submitter does not "customarily" disclose the information to the public and provided that disclosure would be likely to interfere with the continued and full availability of the information to the government, or (ii) information likely to cause substantial harm to the competitive position of the person from whom it was obtained and likely to impact on the government's ability to obtain reliable information in the future.

6-May-13

See Critical Mass Energy Project v. NRC, 975 F2d 871, 879-80 (D.C. Cir. 1992), cert. denied, 113 S.Ct. 1579 (1993); National Parks & Conservation Ass'n v. Morton, 498 F2d 765, 766 (D.C. Cir. 1974); Canadian Commercial Corp. v. Dept. of Air Force, 514 F.3d 37 (D.C. Cir., 2008).

In an effort to minimize further delay we request that you review the redactions and identify any withheld information that you wish to receive. MARCORSSYSCOM will then determine whether the release of any requested information is proper under the FOIA and provide any additional releasable information in a "final release" letter. If we do not receive any notification from you, which specifically requests the release of any redacted information by May 20, 2013, this letter will become the final response and we will close this FOIA request.

If at any time you are not satisfied that a diligent effort was made to process your request, you may file an administrative appeal with the Assistant to the General Counsel (FOIA) at: Department of the Navy, Office of the General Counsel, ATTN: FOIA Appeals Office, 1000 Navy Pentagon Room 4E635, Washington DC 20350-1000.

For consideration, the appeal must be received in that office within 60 days from the date of this letter. Attach a copy of this letter and a statement regarding why you believe an adequate search was not conducted. Both your appeal letter and the envelope should bear the notation "FREEDOM OF INFORMATION ACT APPEAL". Please provide a copy of any such appeal letter to the MARCORSSYSCOM address above.

Fees associated with processing your request are minimal and waived.

Any questions concerning this matter should be directed to Mrs. Bobbie Cave at (703) 432-3934 or bobbie.cave@usmc.mil.

Sincerely,


for LISA L. BAKER
Counsel

INCH-POUNDS

PRF-PMM141/CLRF IC L

MARCORSYSCOM

14 December 2011

PERFORMANCE SPECIFICATION

FOR THE

COMMON LASER RANGE FINDER INTEGRATED CAPABILITY LIGHT
(CLRF IC LIGHT)

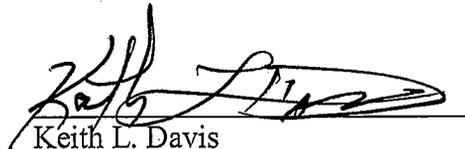
SUBMITTED BY:



Bruce Leaman
Targeting Lead Systems Engineer
PM Fire Support Systems
Marine Corps Systems Command

DATE: 14 DEC 2011

APPROVED BY:



Keith L. Davis
PM Fire Support Systems
Marine Corps Systems Command

DATE: 12/14/2011

Comments, suggestions, or questions on this document should be addressed to: MARINE CORPS SYSTEMS COMMAND, ATTN PM FSS, 2200 Lester Street, Quantico, VA 22134-6050. Since contact information can change, you may want to verify the currency of this address information by using the PM Fire Support Systems Web Site at <http://www.marcorsyscom.usmc.mil/sites/fss/>.

AMSC N/A

FSC 1240

Distribution Statement A. Approved for public release; distribution is unlimited.

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Record of Changes

Date	Version	Title and/or Brief Description	Entered By
1 August 2011	1	Initial Release	Michelle Winston
30 September 2011	2	AEROS ORD; Change 2	Bruce Leaman
14 December 2011	3	Remove requirements related to STANAG 3733 and SLP	Bruce Leaman

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PERFORMANCE SPECIFICATION
COMMON LASER RANGEFINDER INTEGRATED CAPABILITY LIGHT
(CLRf IC LIGHT)

1. Scope

This specification covers the Common Laser Rangefinder Integrated Capability Light (henceforth known as CLRf IC Light) system as a foot-mobile replacement for the Common Laser Rangefinder (CLRf) suite of equipment.

1.1 System Description

The CLRf IC Light is a handheld, lightweight, man portable, GPS target location device. The principle function of the CLRf IC System is to assist the operator in determining the location of a target or other object of interest by measuring the distance, direction, and vertical angle from the operator to the object. The CLRf IC System shall also provide the capability to export these measurements (in a suitable digital format) through a serial communications port to external digital devices for further processing. The CLRf IC System shall also assist the operator with day and night target detection, recognition, and identification. The CLRf IC System shall be capable of operating in the full range of environments and operational situations where Marines deploy. Objective requirements that assist the user in target location, detection, recognition, and identification, include the CLRf IC System internal capabilities of laser spot imaging of multiple laser wavelengths.

2. Applicable Documents

2.1 General

The documents listed in this section are referenced in sections 3, 4, and 5 of this specification. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, and 5 of this specification, whether or not they are listed.

2.2 Government Documents

2.2.1 Specifications, Standards, and Handbooks

The following specifications, standards, and handbooks of the exact revision listed below form a part of this document to the extent specified herein.

DEPARTMENT OF DEFENSE STANDARDS

MIL-PRF-49324(NVI)	Monocular Night Vision Device AN/PVS-14 Department Of Defense Standards
MIL-STD-129P with CHANGE 4	Military Marking for Shipment and Storage
MIL-STD-130N MIL-STD-461F	Identification Marking of U.S. Military Property Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment
MIL-STD-810G	Environmental Engineering Considerations and Laboratory Tests
MIL-STD-882D	Standard Practice for System Safety
MIL-STD-1472F(1)	Human Engineering
MIL-STD-1474D(1)	Noise Limits
MIL-STD-1913	Dimensioning of Accessory Mounting Rail for Small Arms Weapons, Dated 03 Feb 1995, with Change Notice 1 dated 10 June 1999 and Notice of Validation dated 20 April 2004
MIL-STD-1916	DOD Preferred Methods for Acceptance of Product
MIL-STD-1425A	Safety Design Requirements for Military Lasers and Associated Support Equipment
MIL-STD-2073-1E	Standard Practice for Military Packaging

DEPARTMENT OF DEFENSE HANDBOOKS

DOD-HDBK-178(1)	Quantitative Description of Obscuration Factors for Electro-Optical and Millimeter Wave Systems
HDBK-217F(2)	MIL-Reliability Prediction of Electronic Equipment
DOD-HDBK-743A	Anthropometry of U S Military Personnel (Metric)
MIL-HDBK-783	Chemical and Biological (CB) Contamination Avoidance and Decontamination
MIL-HDBK-784	Design to Minimize Contamination and to Facilitate Decontamination of Military Vehicles and Other Equipment: Interiors and Exteriors
MIL-HDBK-1916	Companion Document to MIL-STD-1916

(Copies of these documents are available online at
<http://assist1.daps.dla.mil/quicksearch/>, <http://forms.daps.dla.mil/>,
<http://dodssp.daps.dla.mil>, or from the Standardization Document Order Desk,
700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government Documents, Drawings, and Publications

The following other Government documents, drawings, and publications of the exact revision level shown form a part of this document to the extent specified herein.

CODE OF FEDERAL REGULATIONS

Title 21, Part 1040 Performance Standards for Light Emitting Products
(Revised 01 April 2005)

(Copy of this document available online at
<http://www.navsea.navy.mil/nswc/dahlgren/TIE/LASER/federal.aspx>.)

CHAIRMAN OF THE JOINT CHIEFS OF STAFF INSTRUCTION

CJCSI 6130.01D 2007 CJCS Master Positioning, Navigation, and
Timing Plan

(Copies of this document are available online at
http://www.dtic.mil/cjcs_directives.)

DEPARTMENT OF THE ARMY

AR 70-38 Research, Development, Test and Evaluation of
Materiel for Extreme Climatic Conditions
(15 September 1979 Edition)

(Copies of these documents can be obtained by written request from Marine
Corps Systems Command, Procuring Contracting Officer.)

Night Vision's Thermal and Image Processing (NVThermIP) Model, 2009
Release

Solid State Camera and Image Processing (SSCamIP) Model , 2009 Release

Image Intensified Camera and Image Processing (IICamIP) Model, 2009 Release

(Copies of these models can be purchased online at www.sensiac.org under the
Models and Simulations tab on the left.)

DEPARTMENT OF THE NAVY

NAVSEA S9310- AQ- Technical Manual for Batteries, Navy Lithium
SAF-010 Safety Program Responsibilities and Procedures
(20 July 1988 Edition)

OPNAVINST Navy Laser Safety Hazards Program Dated 02
5100.27B/MCO 5104.1C May 2008

(Copies of these documents are available online at
<http://www.marcorsyscom.usmc.mil/sites/PMEPS/DOCUMENTS/s9310aqsaf010.pdf>.)

NAVSTAR GLOBAL POSITIONING SYSTEM JOINT PROGRAM OFFICE
(GPS JPO)

IS-GPS-153 REVISION D	GPS User Equipment Interface Specification for the GPS Standard Serial Interface Protocol (GSSIP) of DoD Standard GPS UE Radio Receivers, 23 July 2007 (Target Sight Message ID 5029, pages B-86 and B-87)
SS-M/V-500 REV D Part I	System Specification for NAVSTAR Global Positioning System (GPS) Precision Lightweight GPS Receiver (PLGR), 03 April 1995
SS-M/V-500D/2	Addendum Specification – Specification for NAVSTAR Global Positioning System (GPS) Precision Lightweight GPS Receiver (PLGR), 02 June 2002
SS-M/V-600B	Item Specification for the NAVSTAR Global Positioning System (GPS) Defense Advanced GPS Receiver (DAGR), 13 July 2006
GPU-03-105	Security Approval Requirements for Selective Availability Anti-Spoofing Module (SAASM) Host Application Equipment (HAE), 31 January 2004

(Copies of these documents can be obtained by written request from Marine Corps Systems Command, Procuring Contracting Officer.)

2.2.3 Non-Government Documents

The following documents of the exact revision level shown form a part of this document to the extent specified herein.

Kollsman Document EICD48151000-1, Rev C	Electrical Interface Control Document for AN/PAS-25, Thermal Laser Spot Imager
Kollsman Drawing MICD48151000, Rev B	Mechanical Interface Control Drawing (for Thermal Laser Spot Imager, AN/PAS-25)
Kollsman Drawing MICD48051000, Rev B	Mechanical Interface Control Drawing (for Long Range Thermal Imager, AN/PAS-22)
Kollsman Document EICD48081000-1, Rev C	Electrical Interface Control Document for the Portable Lightweight Designator Rangefinder
Kollsman Drawing 48081001, Rev A	PLDR, Interface Control Drawing
Kollsman Document	LTD Electrical Interface for the Joint

EI 8388-1000-00, Rev 0	Terminal Attack Controller Laser Target Designator
Kollman Drawing IF-8388-1000-00, Rev 0	LTD Mechanical Interface for the Joint Terminal Attack Controller Laser Target Designator
Ashbury Document 2213-A-4005, Rev. 3	Interface Control Document for Vector 21 Modification B-CLRF

(Copies of these documents can be obtained by written request from Marine Corps Systems Command, Procuring Contracting Officer.)

2.3 Order of Precedence

In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. Requirements

3.1 Nominal Mission Profile

The nominal mission profile for the CLRF IC Light is 72 hours. During the mission, the CLRF IC Light system will be operated for three six-hour periods. Half of the operating hours (9 total hours) will occur during daylight, the other half of the operating hours (9 total hours) will occur at night. A total of 75 targeting measurement/data export operations will be performed. It is acceptable to change the battery set twice during a nominal mission profile and the additional batteries will not count towards the CLRF IC Light system weight.

3.2 Weight

The CLRF IC Light, including the one set of batteries inside the system, shall be no more than 3.0 lbs (Threshold), 2.75 lbs (Objective). This weight does not include ancillary items. The CLRF IC Light full system weight, including three sets of batteries, tripod, cables, adapters, field carry pouch, and tripod soft carry pouch shall be no more than 11.0 lbs (Threshold), 9.0 lbs (Objective).

3.3 Optics

3.3.1 Optical System

3.3.1.1 Viewing Optics

The CLRF IC Light shall be monocular (Threshold); biocular (Objective).

3.3.1.2 Viewing Sensor

It is desired that the CLRF IC Light will provide direct view optics (Objective).

3.3.2 Daytime Target Recognition

The CLRF IC Light shall permit an operator who is trained in target recognition to be able to recognize an unobstructed, uncamouflaged, 2.1 x 2.1 meter target (oblique angle view of a Toyota Hilux pickup) under light haze visibility day from 100 meters to 3,000 meters (Threshold); 100 meters to 4,000 meters (Objective).

3.3.3 Nighttime Target Recognition

The CLRF IC Light shall permit an operator who is trained in target recognition to recognize an unobstructed, uncamouflaged, 2.1 x 2.1 meter target (oblique angle view of a Toyota Hilux pickup) under light haze visibility night with ¼ moon illumination from 100 meters to 900 meters (Threshold); 100 meters to 1,500 meters (Objective).

3.3.4 Field of View

3.3.4.1 Wide Field of View

The CLRF IC Light shall have a wide Field of View (FOV) of at least 120 mils (Threshold), or at least 150 mils (Objective).

3.3.4.2 Narrow Field of View

If a narrow field of view is necessary to meet the target recognition requirements (3.3.2, 3.3.3), the narrow FOV shall be no less than 60 mils (Threshold). Additional and/or continuous zoom is desired to allow improved recognition (Objective).

3.4 Angle Measurement Capabilities

3.4.1 Azimuth Performance

3.4.1.1 Limited Availability Azimuth Measurement

The CLRF IC Light shall measure the OT direction with an accuracy of 10 mils or less, relative to true north, with at least 50% availability in the presence of static, dynamic, and transient magnetic disturbances in 5 seconds or less; 8 mils or less, relative to magnetic north, in a magnetically sterile environment 100% of the time in 2 seconds or less (Threshold); relative to true north (Objective). Sensor pre-calibration, if required, shall last the duration of the battery life (Threshold), and is not included in this timing requirement.

3.4.1.2 Full Availability Azimuth Measurement

It is desired the CLRF IC Light measure the OT direction with an accuracy of 10 mils or less, relative to true north, with 100% availability in the presence of static, dynamic and transient magnetic disturbances in 120 seconds or less (Objective).

Sensor pre-calibration, if required, shall last the duration of the battery life (Threshold), and is not included in this timing requirement.

3.4.2 Maintaining Azimuth upon Relocation

It is desired that once the CLRF IC Light has determined true north and the user moves the CLRF IC Light with or without the tripod, the CLRF IC Light remain calibrated and not have to be recalibrated to find true north again under the slew rate of 300° per second (Objective). It is desired that once the CLRF IC Light has determined true north the accuracy be maintained for at least 30 minutes after initialization (Objective).

3.4.3 Vertical Angle

The CLRF IC Light shall determine the vertical angle (VA) from the observer to a target, through a range of ± 800 mils (Threshold), with an accuracy of ± 5 mils (Threshold) to ± 2.5 mils (Objective).

3.4.4 Roll Angle

The CLRF IC Light shall be capable of meeting all operational requirements through roll angles ranging from ± 250 mils (Threshold), ± 500 mils (Objective).

3.4.5 Reserved

3.5 Setup Time

3.5.1 Rapid Startup Time

The CLRF IC Light rapid startup shall commence at initiation of power on and complete when the visual displays are up and the operator may begin observation. The CLRF IC Light shall permit the operator to complete rapid startup in no more than 15 seconds (Threshold); less than 5 seconds (Objective).

3.5.2 Full Setup Time

Full setup shall include all actions necessary for the CLRF IC Light to provide target location (OT distance, direction, and vertical angle) to the threshold limits. With current GPS almanac data, the CLRF IC Light shall permit the operator to complete full setup in 5 minutes (Threshold); 2 minutes (Objective).

3.6 SAASM GPS

The CLRF IC Light shall include a GPS JPO approved per GPU-03-105 internal SAASM GPS to provide self location and target location (Threshold). The SAASM GPS shall be able to update the DoD World Magnetic Model, published by the National Geophysical Data Center (NGDC) of the National Oceanic and Atmospheric Administration (NOAA), and run in continuous mode (Threshold).

3.6.1 Self- Location

The CLRF IC Light system performing a cold start with a current almanac, for the operating location, shall provide self location within 70 seconds, 95% of the time (Threshold). All classified GPS information and algorithms shall be within the security boundary of the SAASM (Threshold).

3.7 Laser Rangefinder

3.7.1 Laser Rangefinder Eye-Safety

The CLRF IC Light shall include a Class 1 eye-safe laser range finder (Threshold).

3.7.2 Man-Size Target Range Finding

On a 7 km visibility day, the CLRF IC Light shall measure the distance, within an accuracy of 10 meters for a 2.0 m x 0.5 m dismounted man-size target from 100 meters to 2,500 meters (Threshold); 100 meters to at least 5,000 meters (Objective).

3.7.3 NATO Standard Target Range Finding

On a 7 km visibility day, the CLRF IC Light shall measure the distance, within an accuracy of 10 meters for a 2.3 meter x 2.3 meter NATO standard target from 100 meters to 4,000 meters (Threshold); 100 meters to 10,000 meters (Objective).

3.7.4 Stabilization Device

The CLRF IC Light shall be able to measure OT Distance to the threshold accuracy to within 10 meters to a distance of at least 2,000 meters without requiring the operator to use any type of stabilization device (i.e. tripod) 50 percent of the time (Threshold). It shall be able to measure all elements of target location: OT Distance (Requirements 3.7.2, 3.7.3), direction (Requirements 3.4.1.1, 3.4.1.2), VA (Requirement 3.4.3) to the threshold accuracies, specified above, without requiring the operator to use any type of stabilization device (i.e. tripod) 100 percent of the time (Objective).

3.7.5 First/Strongest/Last Return

After a single range measurement, the CLRF IC Light rangefinder shall provide First/Strongest/Last Return, which will show the range of the closest target, the range of the strongest return, and the range of the furthest target, respectively (Threshold).

3.7.6 Multiple Target Indicator

The CLRF IC Light rangefinder shall provide a Multiple Target Indicator, which will alert the user in the case that multiple range targets were present during any

single range finding operation and allow the user to cycle through and select a desired range (Threshold).

3.7.7 Range Gate

The CLRF IC Light shall be equipped with a minimum and maximum range control that permits the operator to set the minimum and maximum range to the nearest 10 meters from 100 meters to the maximum range of the rangefinder, at which the CLRF IC Light will register a laser return. The system shall enable a user to perform this operation in less than 10 seconds (Threshold).

3.7.8 Glint Protection

It is desired that the CLRF IC Light provide glint protection (Objective).

3.8 Laser Spot Imaging

3.8.1 1064nm Laser Viewing/Detection

It is desired that the CLRF IC Light be capable of viewing or indicating the location of the 1064 nm designator energy within the internal base optic (Objective).

3.8.2 Reserved

3.8.3 IR Pointer Viewing/Detection

It is desired the CLRF IC Light be capable of viewing or indicating the location of 805-870 nm laser energy within the internal base optic (Objective).

3.8.4 Laser Rangefinder Viewing/Detection

It is desired the CLRF IC Light be capable of detecting and displaying the location of its own rangefinder laser energy within the internal base optic (Objective).

3.9 Mechanical Interface

3.9.1 Interface with External Devices

The CLRF IC Light shall interface and operate with the following external devices: Joint Terminal Attack Controller Laser Target Designator (JTAC LTD), AN/PAS-22 Long Range Thermal Imager (LRTI), AN/PAS-25 Thermal Laser Spot Imager (TLSI), AN/PEQ-17 Portable Lightweight Designator Rangefinder (PLDR), and AN/PAS-28 Medium Range Thermal Bi-ocular (MRTB) (Threshold).

3.9.2 Picatinny Rail

The CLRF IC Light shall include at least one Picatinny rail to facilitate mounting day/night sighting optics/imagers (Threshold). The rail shall be aligned with the emitted laser beams (Threshold). If provided as ancillary equipment, the rail shall be installable by the operator without any special tools (Threshold).

3.9.3 1/4-20 Adapter

The CLRF IC Light shall have the ability to mount to a standard 1/4-20 UNC threaded tripod (Threshold). The 1/4-20 UNC threaded hole shall be provided as an ancillary equipment adapter that mounts without tools (Threshold), or it may be integrated into the device near the center of gravity (Objective).

3.9.4 Picatinny Rail Grabber

A Picatinny rail grabber shall be provided (Threshold). The rail grabber shall be aligned with the optical path of the emitted lasers (Threshold). The rail grabber shall contain azimuth and elevation adjustments to facilitate boresighting to a device with a Picatinny rail (Threshold). The rail grabber shall be provided as an ancillary equipment adapter that mounts to the CLRF IC Light without tools (Threshold), or it may be integrated into the device (Objective).

3.9.5 Protective Optics Covers

The CLRF IC Light shall include tethered or hinged covers to protect all lenses and fully block all emitted laser beams (Threshold).

3.9.6 Neck Strap

The CLRF IC Light shall be equipped with a neck strap that permits the operator, dressed in all authorized variations of Marine Corps combat clothing, to carry and operate the CLRF IC Light while it is suspended from his neck (Threshold).

3.9.7 Transit Case

The transit case shall be designed to protect the CLRF IC Light, and associated equipment, from dust, rain, snow, sleet, and salt spray while it is being transported or stored, and be made of a non-reflective material. The transit case shall be able to hold one CLRF IC Light with neck strap, tripod (if required), two sets of spare battery packs, associated cables, cleaning kit, ancillary equipment, and operator's manual (Threshold).

3.9.8 Remote Fire Cable

The remote fire cable shall fire upon button release, shall not exceed 1 m in length, and shall trigger a full measurement to calculate a target location within the system (Threshold).

3.10 Digital Interface

When prompted by the operator, the CLRF IC Light shall output a 5029 serial communication message per IS-GPS-153 Revision D, Message ID 5029, pages B-

86 and B-87 (Threshold). The CLRF IC Light shall receive and display information from the JTAC LTD and PLDR per the Kollsman Documents EI 8388-1000-00 and EICD48081000-1, respectively (Threshold).

3.11 Interface Cables

The CLRF IC Light shall include a Strikelink interface cable (15 pin) per Ashbury Document, Interface Control Document for Vector 21 Modification B-CLRF 2213-A-4005, Rev. 3 which shall be at least 1.5 m in length (Threshold). The CLRF IC Light shall include a JTAC LTD, PLDR, and TLSI interface cable(s) (Threshold).

3.12 Field Carry Pouch

A soft material, field carry pouch shall be provided which is attachable to the MOLLE system (Threshold). The field carry pouch shall fit the CLRF IC Light and one extra set of batteries (or rechargeable battery pack, if so equipped) (Threshold). The field carry pouch shall retain the CLRF IC Light securely to the Marine's body/equipment while walking, running, and jumping (Threshold).

3.13 Tripod Soft Carry Pouch

It is desired that a soft material, field carry pouch be provided to carry the tripod which is attachable to the MOLLE system (Objective). If provided, it is desired that the tripod field carry pouch also be able to carry any cables and adapters that are provided with the system (Objective).

3.14 Trigonometric Capabilities

The CLRF IC Light shall calculate and display the following trigonometric capabilities: slant range, elevation angle, fall of shot correction, horizontal distance and height difference to remote object, slant range between two remote objects, horizontal and vertical distance between two remote objects, combined azimuth and elevation angle, azimuth and horizontal distance between two remote objects, relative horizontal and vertical angle between two remote objects (Threshold).

3.15 Battery Component

3.15.1 Interchangeable Battery Cartridges

The CLRF IC Light shall operate with interchangeable cartridges. One type of cartridge shall accept AA (lithium or alkaline) and one type of cartridge shall accept CR123s (Threshold). It is desired that a single battery cartridge accept both CR123s and AA size batteries (Objective). It is desired that the batteries may be inserted into the battery cartridge in any orientation and still function correctly (Objective). It is desired that the battery cartridge cannot be inserted into the system incorrectly (Objective).

3.15.2 Rechargeable Battery Pack

It is desired that, in addition to the use of AA or CR123s, a rechargeable battery pack be provided and fit the same space as the AA and CR123 cartridges (Objective). It is desired that the battery pack cannot be inserted into the system incorrectly (Objective).

3.15.3 External Power

The CLRF IC Light shall accept external power from BA-5590, BB-2590, 110 VAC, and 12 and/or 24 VDC Vehicular Power (Threshold).

3.15.4 System Damage

The CLRF IC Light shall not be damaged by over/under voltage from external power sources. The system shall not be damaged by connecting or disconnecting to the external battery while the system is operating (Threshold).

3.15.5 Battery Status

The CLRF IC Light system shall provide a low power battery status indicator that alerts the user when the CLRF IC Light has only enough battery life remaining for 30 minutes or less of operation (Threshold).

3.15.6 Battery Life

The CLRF IC Light shall permit 6 hours of operation on a single set of batteries (Threshold). It is desired that the CLRF IC Light will permit 8 hours of operation on a single set of batteries (Objective).

3.15.7 Auto Power Shut-Off

The CLRF IC Light shall execute an auto-shutdown command to automatically turn off the system after 20 minutes without operator interaction (Threshold).

3.16 Boresight Alignment

The system shall maintain internal boresight across all FOVs, magnifications, optical systems, lasers and laser receivers to within 0.5 mils over the operational temperature range (Threshold). It is desired the CLRF IC Light not need boresight adjustments after delivery (Objective).

3.17 Tripod

The tripod shall be non-reflective and non-magnetic, weigh less than or equal to 2.5 lbs, and have an azimuth, elevation fine adjust capability, and be at least equal in durability to the CLRF IC Light (Threshold). It is desired to weigh less than or equal to 2.0 lbs (Objective).

3.18 Tripod Size

The tripod shall be compact enough, when not in use, to fit in the cargo pocket of standard issue camouflage utility uniform (Threshold).

3.19 Viewing Optics

3.19.1 Eye Protection

The CLRF IC Light optics shall contain Laser Eye Protection capable of, at a minimum, attenuating laser radiation levels below the Class I AEL at the aperture for the 80 mJ energy 1064 nm laser and the 1 Watt power IR Pointer laser (Threshold).

3.19.2 Eyepiece

3.19.2.1 Diopter Adjustments

The CLRF IC Light optics shall have a diopter adjustment from +2 to -6 diopters (Threshold).

3.19.2.2 Exit Pupil

The CLRF IC Light optics shall have an exit pupil diameter not less than 6mm (Threshold).

3.19.2.3 Eye Relief

The CLRF IC Light optics shall have an eye relief not less than 18mm (Threshold).

3.19.3 Reticle and Reticle Scales

3.19.3.1 Reticle Operation

The CLRF IC Light reticle shall be viewable by the operator during daylight and nighttime operation (Threshold).

3.19.3.2 Reticle Resolution

The CLRF IC Light reticle shall be graduated in 5 mil increments and labeled in 10 mil increments (Threshold).

3.19.3.3 Reticle Pattern

The CLRF IC Light reticle shall be of the mil-scale variety (as shown in Figure 3-1) to allow trained users to estimate ranges (Threshold), user-selectable (Objective).

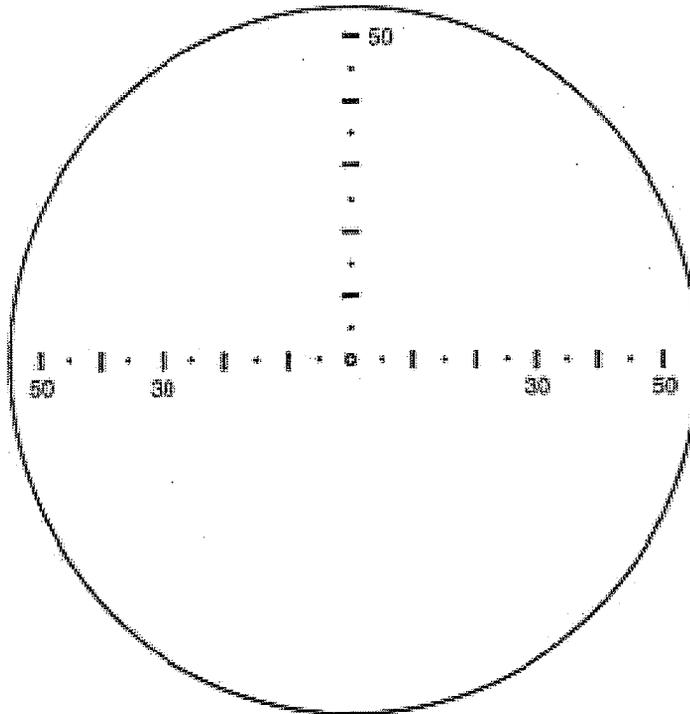


Figure 3-1. Mil-Scale Reticle Pattern

3.19.4 Data Display

The CLRF IC Light system shall display target location data (OT True Azimuth, OT Range, OT Vertical Angle), 10-digit grid target location, 10-digit grid self-location, and shall include indication of coordinate reference, measurement units, battery status, multiple returns, north reference, and an indication when a Figure of Merit (FOM) 2 or better accuracy is not achieved within the internal base optic (Threshold).

3.19.5 Legibility

3.19.5.1 Visibility

The CLRF IC Light system visual display shall be legible under all light conditions encountered during system operation even when users are wearing polarized eye wear (Threshold). CLRF IC Light display shall have a user-selectable light level down to fully off for night (Threshold).

3.19.5.2 Display Viewing

The CLRF IC Light display shall be viewable to the user without removing his eye from the eyepiece (Threshold).

3.19.5.3 Visual Display Features

The CLRF IC Light visual display shall be visible within 2.0 seconds of the observer activating the laser fire switch and shall remain visible, as long as the laser fire button is depressed (Threshold).

3.19.6 Display Units

The CLRF IC Light shall display angle measurements in mils and degrees and be user selectable (Threshold). The CLRF IC Light shall display the north reference in user-selectable grid true or magnetic (Threshold). The CLRF IC Light system shall display ranges in meters or yards (user-selectable) in single digit increments (Threshold). The CLRF IC Light shall display self location and target location in user-selected coordinate format per IS-GPS-153, Revision D (Threshold). The CLRF IC Light shall display FOM (Threshold).

3.19.7 Display Precision

3.19.7.1 Precision of Data Display

The CLRF IC Light system data display precision shall be less than or equal to 1 mil when set to mil units or less than or equal to 0.1° when set to degrees (Threshold).

3.19.7.2 Precision of Digital Data

The CLRF IC Light digital data precision for angular measurements shall be less than or equal to 0.1 mil (Threshold). The CLRF IC Light digital data precision for distance shall be less than or equal to 0.1 m (Threshold).

3.19.8 Target Location Error Indicator

It is desired that the CLRF IC Light system display an estimation of the Target Location Error Category (dictated by the Joint Close Air Support publication 3-09.3, dated 08 July 2009) to the user for each measurement taken and include the errors introduced from self-location accuracy, range finding accuracy, and azimuth accuracy (Objective). Target Location Error Categories are shown in Figure 3-2.

TARGET LOCATION ERROR CATEGORIES																										
TLE Categories (ref. Circular Error on Ground)	CAT I CE 0-20 ft 0-6 m			CAT II CE 21-50 ft 7-15 m			CAT III CE 51-100 ft 16-30 m			CAT IV CE 101-300 ft 31-91 m			CAT V CE 301-1000 ft 92-305 m			CAT VI CE >1000 ft (>305m) Or Large Elliptical Error										
Circular, Vertical, Spherical Error Predictions	CE 90	VE 90	SE 90	CE 90	VE 90	SE 90	CE 90	VE 90	SE 90	CE 90	VE 90	SE 90	CE 90	VE 90	SE 90	CE 90	VE 90	SE 90								
LEGEND																										
CAT	category			ref	reference			CE	circular error			SE	spherical error			TLE	target location error									
ft	feet			VE	vertical error																					
m	meter																									

Figure 3-2. Target Location Error Categories

3.19.9 Safety Messages

3.19.9.1 Warning Messages

The CLRF IC Light shall display a warning message notifying the user that their present position is less than the user-defined Minimum Safe Range value from the target position relative to the ordnance being used and injury or death could result (Threshold).

3.19.9.2 Danger Messages

The CLRF IC Light shall display a danger message notifying the user that their present position to the target location is less than 100 m from the target position relative to the ordnance being used and injury or death could result (Threshold). The Warning Message and Danger Message are mutually exclusive. If both conditions are met, only the Danger Message will be displayed (Threshold).

3.20 Built-In-Test (BIT)

3.20.1 BIT Accuracy

The CLRF IC Light shall have a Built In Test (BIT) capability that will check system status with 95% accuracy (Threshold). It is desired the BIT capability have 99% accuracy (Objective).

3.20.2 BIT False Alarm Rate

The false alarm rate shall be less than 10% for system status tests (Threshold).

3.20.3 BIT Display

The CLRF IC Light system BIT capability shall display the software version and check the display (Threshold).

3.21 Graceful Degradation

CLRF IC Light shall be designed for graceful degradation, meaning that the failure of one or more subsystems shall not result in the failure of the entire system, and, in as much as is practicable, shall not compromise the mission (Threshold).

3.22 System Signature

3.22.1 Aural Detectability

It is desired that the CLRF IC Light aural detectability distance be less than 20 meters during operation (Objective).

3.22.2 Stray Light Security

A method shall be provided that allows the operator to adjust the brightness of all illuminated indicators to minimize detection (Threshold). If a self-closing eye cup is used, the eye cup shall be able to be locked in the open position once fully depressed (Threshold). It is desired that the CLRF IC Light not be visible (displays, indicators) at ranges greater than 20 meters to unaided viewing or when viewing with 3rd generation NVGs (Objective).

3.23 Environmental Requirements

3.23.1 Chemical, Biological, Radiological and Nuclear (CBRN) Decontamination

The CLRF IC Light shall be able to withstand, with limited operational degradation, at least 4 exposures to the material-damaging effects of CBRN contaminants, decontaminants, and decontaminating procedures in a 72-hour period (Threshold), indefinitely (Objective). NOTE: Removing and discarding external covering materials to meet this requirement is acceptable provided the procedure to do so can be performed by the operator in a tactical environment and that the functionality of the CLRF IC Light is not degraded by the removal of the covering material. MIL-HDBK-783 and MIL-HDBK-784 may be referred to for guidance.

3.23.2 Military Free Fall Operations-Altitude (Non-operational)

The CLRF IC Light shall not suffer any damage or degradation in performance (as a result of atmospheric pressure related effects) after being subjected to a

military free fall operation while being carried by a user conducted from 25,000 ft Mean Sea Level (MSL). It is desired that The CLRf IC Light will not suffer any damage or degradation in performance (as a result of atmospheric pressure related effects) after being subjected to a military free fall operation conducted from 42,000 ft MSL (Objective).

3.23.3 Reserved

3.23.4 Immersion (30 ft)

The CLRf IC Light shall not suffer any damage or degradation in performance following a 30-minute submersion in water at a depth of 30 ft while sealed in a waterproof bag (Threshold). It is desired that the CLRf IC Light will not suffer any damage or degradation in performance following a 30-minute submersion in water at a depth of 40 ft while sealed in a waterproof bag (Objective).

3.23.5 Immersion (1.0 m)

The CLRf IC Light shall not suffer any damage or degradation in performance following a 10-minute submersion unprotected in fresh or salt water at a depth of 1.0 m (Threshold).

3.23.6 Humidity

The CLRf IC Light shall be able to survive between 0% and 100% humidity (Threshold).

3.23.7 Operating Temperature

The CLRf IC Light shall be capable of operating in air temperatures ranging from -25°F to 125°F (Threshold).

3.23.8 Storage Temperature

The CLRf IC Light shall be capable of being stored in temperatures ranging from -30°F to 145°F without the benefit of the field carry pouch or transit case (Threshold).

3.23.9 Temperature Shock

The CLRf IC Light shall not suffer any damage or degradation in performance following sudden changes in ambient air temperature of up to 35.6°F/min (Threshold), or up to 50°F/min (Objective).

3.23.10 Fungus

The CLRf IC Light (free of all salt residues) shall neither support fungal growth nor suffer damage or degradation of performance caused by the presence of fungus spores or adjacent fungal growth (Threshold).

- 3.23.11 Mechanical Vibration (Minimum Integrity)
The CLRF IC Light, within its transit case, shall be able to withstand the vibration effects experienced during transport in military aircraft (to include helicopter), cross-country (off-road) vehicular movement, and maritime transport (Threshold).
- 3.23.12 Transportation Vibration (Loose Cargo)
While in its transit case, the CLRF IC Light shall operate without damage or degradation following exposure to transportation vibration (Threshold).
- 3.23.13 Rugged Handling
The CLRF IC Light in its Field Carry Pouch shall not be damaged or degraded in performance after experiencing mechanical shocks commonly induced during operations such as entering and exiting vehicles, running and jumping (Threshold). It is desired that the CLRF IC Light without its Field Carry Pouch not be damaged or degraded in performance after experiencing mechanical shocks commonly induced during operations such as entering and exiting vehicles, running and jumping (Objective).
- 3.23.14 Sand and Dust
The CLRF IC Light shall operate without damage or degradation after exposure to blowing dust (Threshold).
- 3.23.15 Salt Fog
The CLRF IC Light shall operate without leakage, damage or degradation after exposure to a salt fog environment (Threshold).
- 3.23.16 Explosive Atmosphere
Authorized operator actions including but not limited to CLRF IC Light operation, system assembly/disassembly, and operator maintenance, checks, and services, shall not cause ignition of an atmosphere that is heavily laden with fumes from ground vehicles or aircraft fuels (Threshold).
- 3.23.17 Electromagnetic Interference/Electromagnetic Vulnerability (EMI/EMV)
In all of its operational configurations, the CLRF IC Light shall meet requirements as specified for RE102 (2 MHz - 18GHz) and RS103 (2 MHz - 18GHz) in MIL-STD-461F (Threshold).
- 3.23.17.1
- 3.23.18 Solar Radiation
The CLRF IC Light shall not suffer any damage when exposed to solar radiation of up to $1120\text{W}/\text{m}^2$ (Threshold). It is desired that the CLRF IC Light be capable of operating in ambient temperature fluctuations from 14°F to 122°F with exposure to solar radiation of up to $1120\text{W}/\text{m}^2$ (Objective).

3.24 Logistics

3.24.1 Mean Time Between Failure (MTBF).

The CLRF IC Light shall have a Mean Time Between Operational Mission Failure (MTBOMF) no less than 2,160 hours as defined in section 6.3 (Threshold).

3.24.2 Reserved

3.24.3 Preventive Maintenance

The CLRF IC Light Preventive Maintenance shall be performed weekly while in storage and daily under operational conditions. The mean time to perform PM shall not exceed 15 minutes (Threshold), 5 minutes (Objective).

3.24.4 Reserved

3.25 Human Systems Integration

3.25.1 Control Accessibility

The CLRF IC Light controls shall be accessible and distinguishable when the system is in its operational configuration and when it is supported by artificial means (i.e. tripod) (Threshold).

3.25.2 Power Controls

The CLRF IC Light shall have a single finger/thumb operated control that shall turn the power on and off (Threshold).

3.25.3 Firing Controls

The CLRF IC Light shall have a single finger/thumb operated control shall fire the laser and cause the target location data to be displayed both when pushing the control and upon release of the control (Threshold).

3.25.4 Operation

The CLRF IC Light shall be capable of being operated by a single 5th through 95th percentile male Marine per MIL-STD-1472F(1) while wearing any of the full range of Marine Corps combat clothing to include camouflage utilities, cold and wet weather protective clothing, arctic clothing, and Mission Oriented Protective Posture (MOPP) Gear - Levels I through IV with no more than minimal degradation to the user's ability to accomplish the mission (Threshold).

3.26 Safety

3.26.1 Battery Safety Requirements

If the CLRF IC Light battery contains Lithium, the system and the battery shall be capable of meeting all requirements needed for approval by the Naval Lithium Battery Safety Program per NAVSEA S9310-AQ-SAF-010 (Threshold); is already approved (Objective).

3.26.2 Safety Assessment

The operation, maintenance, storage, transportation, or disposal of the CLRF IC Light shall not present any hazards that are assessed as more severe than Medium risks as specified in MIL-STD-882D (Threshold). It is desired that the operation, maintenance, storage, transportation, or disposal of the CLRF IC Light does not present any hazards that are assessed as more severe than Low risks as specified in MIL-STD-882D (Objective).

3.27 Manufacturing

3.27.1 System Marking

The CLRF IC Light shall have an IUID-compliant identification plate of corrosion-resistant material permanently attached to the outside of the system (Threshold). The identification plate shall be marked in accordance with MIL-STD-130N and shall include as a minimum human-readable nomenclature and serial number (Threshold). It is desired that the CLRF IC Light also have a human-readable warranty label providing pertinent warranty information affixed to the unit (Objective).

3.27.2 Transit Case Marking

The CLRF IC transit case shall have an IUID-compliant identification plate of corrosion-resistant material permanently attached next to the handle so that when the cases are stacked the units are easily identifiable. The identification plate shall also include the name of the system and the TAMCN per the example shown in Figure 3-3. The CLRF IC transit case shall also have an identification plate attached on the outside lid containing the part number(s) and serial number of the system per the example shown in Figure 3-4.

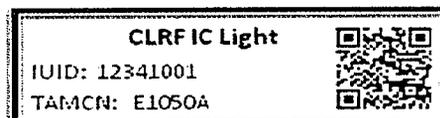


Figure 3-3. Example of Identification Plate next to Transit Case Handle

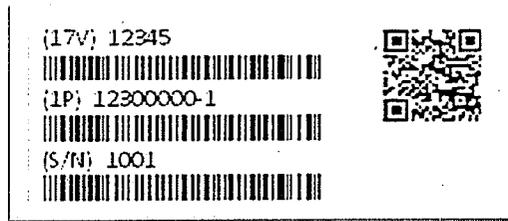


Figure 3-4. Example of Identification Plate on Transit Case Lid

3.27.3 Workmanship

Workmanship in the fabrication and assembly of CLRF IC Light components shall comply with best commercial practices (Threshold). The components shall be clean and free of burrs, sharp edges, unblended radii, surface defects, cracks, chips, dirt, grease (except where specifically required), rust, foreign matter or any evidence of poor workmanship that could render the system unsuitable for its intended purpose or that would affect life, serviceability or appearance (Threshold).

3.27.4 Materials Selection

The CLRF IC Light contractor shall avoid the use of toxic chemicals, hazardous substances, radioactive, or ozone depleting chemicals if feasible. Recycled, recovered, or environmentally preferable materials shall be used to the maximum extent possible, provided the materials meet or exceed the operational and maintenance requirements and promote economically advantageous life cycle costs (Threshold).

4. Verification

4.1 First Article Testing

The contractor is responsible for conducting First Article Testing to show compliance with sections 4.9 through 4.34 of this performance specification. Proof of previous testing or analysis, with government oversight, which satisfies a First Article Test requirement may be submitted in lieu of current testing or analysis.

4.2 Classification of Inspections

The inspection requirements specified herein are classified as follows:

First article inspection (see 4.5)

Conformance inspection (see 4.6)

4.3 Verification Methods

Methods utilized to accomplish verification include:

Analysis

An element of verification that utilizes established technical or mathematical models or simulations, algorithms, charts, graphs, circuit diagrams, or other scientific principles and procedures to provide evidence that stated requirements were met.

Demonstration

An element of verification that involves the actual operation of an item to provide evidence that the required functions were accomplished under specific scenarios. The item may be instrumented and performance monitored.

Examination

An element of verification that is generally nondestructive and typically includes the use of sight, hearing, smell, touch, and taste; simple physical manipulation; and mechanical and electrical gauging and measurement.

Test

An element of verification in which scientific principles and procedures are applied to determine the properties or functional capabilities of items.

4.4 Inspection Conditions

Unless otherwise specified, all inspections shall be performed in accordance with the conditions specified in the applicable paragraphs in this specification or applicable verification methods (Threshold). If inspection conditions are not specified, the inspection may be performed at any temperature between 18°C (64°F) and 30°C (86°F) and at 1.0±0.1 atmosphere of pressure.

4.5 First Article Inspection

The first article inspection shall be performed on a minimum of two systems. A minimum of one system shall be used to perform the tests listed (in the order specified) for Series #1 in Table 1 and a minimum of one system shall be used to perform the tests listed (in the order specified) for Series #2 in Table 1. All other first article inspections shall be performed in any order, and with the number of inspection units acceptable to the Government. Disposition of first article sample systems shall be as specified in the contract or purchase order.

Table 1. First Article Inspection Test Sequence Matrix

First Article Inspection	Requirement Paragraph	Verification Paragraph	Series #1	Series #2		
Mechanical Vibration (Minimum Integrity)	3.23.11	4.30.11	1	1		
Storage Temperature	3.23.8	4.30.8	2	2		
Operating Temperature	3.23.7	4.30.7	3	3		
Temperature Shock	3.23.9	4.30.9	4	4		
Solar Radiation	3.23.18	4.30.18	5	5		
Military Free Fall Operations – Altitude (Non-operational)	3.23.2	4.30.2	6	6		
Rugged Handling	3.23.13	4.30.13	7	7		
Transportation Vibration (Loose Cargo)	3.23.12	4.30.12	8	8		
Immersion (1.0 m)	3.23.5	4.30.5	9	9		
Immersion (30 ft)	3.23.4	4.30.4	10	10		
Explosive Atmosphere	3.23.16	4.30.16	These tests may be performed with either the Series #1 or Series #2 system.			
Electromagnetic Interference/Electromagnetic Vulnerability (EMI/EMV)	3.23.17	4.30.17				
Humidity	3.23.6	4.30.6				
Sand and Dust	3.23.14	4.30.14				
Salt Fog	3.23.15	4.30.15				
Fungus	3.23.10	4.30.10				11

4.6 Conformance Inspection

Unless otherwise specified in this document or in the contract or purchase order, the contractor shall subject all CLRF IC Light systems to inspection for conformance to this specification in accordance with MIL-STD-1916.

Contractors that have an acceptable quality system and proven process controls relevant to the products being procured using this specification are encouraged to consider submitting an alternate acceptance method for verifying conformance to this specification. The acceptability of alternate acceptance methods is dependent upon the existence of a quality system, the demonstration of its process focus, and the availability of objective evidence of effectiveness. The contractor developed Acceptance Test Procedure shall be approved by the Government and revised as necessary (Threshold).

4.7 Responsibility for Conformance

Contractors are required to deliver CLRF IC Light systems that conform to the requirements of this specification and the applicable contract or purchase order, and to generate and maintain sufficient evidence of conformance. Contractors are responsible for establishing their own manufacturing and process controls to

produce results in accordance with the requirements. Contractors are expected to use recognized prevention practices such as process controls and statistical techniques to reduce or eliminate manufacturing defects. Absence of any inspection or process control requirement in this specification or in the contract does not relieve the contractor of responsibility for assuring that all products submitted to the Government for acceptance conform to all requirements of the contract and this specification.

4.8 Government Verification of Conformance

The Government reserves the right to verify the conformance of any system offered for delivery to the requirements of this specification through independent analyses, inspections, testing, or demonstrations. Deficiencies found by the Government shall be a cause for rejection of the CLRF IC Light until the manufacturer has provided evidence that the deficiencies have been corrected (Threshold). The Government also reserves the right to verify the contractor's implementation of, and adherence to, their manufacturing and process controls and to witness the contractor's performance of conformance inspection procedures.

4.9 Operational Utility

4.9.1 Nominal Mission Profile

The ability of the CLRF IC Light to conform to the requirements specified in 3.1 shall be verified through analysis and demonstration.

4.9.2 Weight

The ability of the CLRF IC Light to conform to the requirements specified in 3.2 shall be verified through examination.

4.10 Optics

4.10.1 Optical System

The ability of the CLRF IC Light to conform to the requirements specified in 3.3.1 shall be verified through examination.

4.10.2 Target Recognition

System performance modeling of target recognition sensors shall use the following models and parameters (as applicable):

Emissive energy sensor performance (NVThermIP, 2009 Release, Parameters)

Parameter	Value
Display Brightness (for modeling only)	20 Ft-L
Minimum Frame Rate	30 Hz
NVThermIP Parameters: (Version 2009)	2.1 x 2.1 m Target V50 Recognition = 15(variable gain) RSS ΔT = 1.25 Kelvin Non-Turbulent Conditions Cn2 = 1.0 e-15 Scene Contrast Temperature = 3.75 Kelvin

Reflective energy sensor performance (SSCamIP and IICamIP, 2009 Releases, Parameters)

Parameter	Value
Illumination	Clear Daylight, Quarter Moon, Clear Starlight (SSCamIP Intrinsic Value)
Atmospheric Attenuation	Light Haze (SSCamIP Intrinsic Value)
Sky to Ground Ratio	3
SSCamIP Modeling Parameters (Version 2009)	2.1x2.1 m Target V50 Recognition = 15 Target Intrinsic Reflectivity = 40% Background Intrinsic Reflectivity = 20% No Contrast Enhancement

4.10.2.1 Daytime Target Recognition

The ability of the CLRF IC Light to conform to the requirements specified in 3.3.2 shall be verified through analysis.

4.10.2.2 Nighttime Target Recognition

The ability of the CLRF IC Light to conform to the requirements specified in 3.3.3 shall be verified through analysis.

4.10.3 Field of View

The ability of the CLRF IC Light to conform to the requirements specified in 3.3.4 shall be verified through examination.

4.11 Angle Measurement Capabilities

4.11.1 Azimuth Performance

4.11.1.1 Disturbed Magnetic Environment

The ability of the CLRF IC Light to conform to the requirements specified in 3.4.1.1 between $\pm 64^\circ$ latitude shall be verified through demonstration and analysis.

4.11.1.2 Sterile Magnetic Environment

The ability of the CLRF IC Light to conform to the requirements specified in 3.4.1.2 between $\pm 64^\circ$ latitude shall be verified through demonstration and analysis.

4.11.2 Maintaining Azimuth Upon Relocation

The ability of the CLRF IC Light to conform to the requirements specified in 3.4.2 shall be verified through demonstration and analysis.

4.11.3 Vertical Angle

The ability of the CLRF IC Light to conform to the requirements specified in 3.4.3 shall be verified through demonstration.

4.11.4 Roll Angle

The ability of the CLRF IC Light to conform to the requirements specified in 3.4.4 shall be verified through demonstration.

4.11.5 Reserved

4.12 Setup Time

4.12.1 Rapid Startup Time

The ability of the CLRF IC Light to conform to the requirements specified in 3.5.1 shall be verified through demonstration.

4.12.2 Full Setup Time

The ability of the CLRF IC Light to conform to the requirements specified in 3.5.2 shall be verified through demonstration.

4.13 SAASM GPS

The ability of the CLRF IC Light to conform to the requirements specified in 3.6 shall be verified through analysis.

4.14 Laser Rangefinder

4.14.1 Laser Rangefinder Eye-Safety

The ability of the CLRF IC Light to conform to the requirements specified in 3.7.1 shall be verified through analysis.

4.14.2 Target Range Finding

System performance range modeling and testing shall use the following parameters:

Target Range Determination Parameters

Parameter	Target Type	
Target Size	Man-Size Target 2.0 m x 0.5 m	Standard NATO Target 2.3 m x 2.3 m
Target Reflectivity	50% Lambertian	10% Lambertian
Target Orientation	Normal to Beam	

4.14.2.1 Man-Size Target Range Finding

The ability of the CLRF IC Light to conform to the requirements specified in 3.7.2 shall be verified through demonstration and analysis.

4.14.2.2 NATO Standard Target Range Finding

The ability of the CLRF IC Light to conform to the requirements specified in 3.7.3 shall be verified through demonstration and analysis.

4.14.3 Stabilization Device

The ability of the CLRF IC Light to conform to the requirements specified in 3.7.4 shall be verified through demonstration.

4.14.4 First/Last/Strongest Return

The ability of the CLRF IC Light to conform to the requirements specified in 3.7.5 shall be verified through demonstration.

4.14.5 Multiple Target Indicator

The ability of the CLRF IC Light to conform to the requirements specified in 3.7.6 shall be verified through demonstration.

4.14.6 Range Gate

The ability of the CLRF IC Light to conform to the requirements specified in 3.7.7 shall be verified through demonstration.

4.14.7 Glint Protection

The ability of the CLRF IC Light to conform to the requirements specified in 3.7.8 shall be verified through examination.

4.15 Laser Spot Imaging

4.15.1 1064nm Laser Viewing/Detection

The ability of the CLRF IC Light to conform to the requirements specified in 3.8.1 shall be verified through demonstration.

4.15.2 Pulse Repetition Frequency Codes

The ability of the CLRF IC Light to conform to the requirements specified in **Error! Reference source not found.** shall be verified through demonstration.

4.15.3 IR Pointer Viewing/Detection

The ability of the CLRF IC Light to conform to the requirements specified in 3.8.3 shall be verified through demonstration.

4.15.4 Laser Rangefinder Viewing/Detection

The ability of the CLRF IC Light to conform to the requirements specified in 3.8.4 shall be verified through demonstration.

4.16 Mechanical Interface

4.16.1 Interface with External Devices

The ability of the CLRF IC Light to conform to the requirements specified in 3.9.1 shall be verified through examination and demonstration.

4.16.2 Picatinny Rail

The ability of the CLRF IC Light to conform to the requirements specified in 3.9.2 shall be verified through examination.

4.16.3 1/4-20 Adapter

The ability of the CLRF IC Light to conform to the requirements specified in 3.9.3 shall be verified through examination.

4.16.4 Picatinny Rail Grabber

The ability of the CLRF IC Light to conform to the requirements specified in 3.9.4 shall be verified through examination.

4.16.5 Protective Optics Covers

The ability of the CLRF IC Light to conform to the requirements specified in 3.9.5 shall be verified through examination and demonstration.

4.16.6 Neck Strap

The ability of the CLRF IC Light to conform to the requirements specified in 3.9.6 shall be verified through examination.

4.16.7 Transit Case

The ability of the CLRF IC Light to conform to the requirements specified in 3.9.7 shall be verified through examination.

4.16.8 Remote Fire Cable

The ability of the CLRF IC Light to conform to the requirements specified in 3.9.8 shall be verified through examination and demonstration.

4.17 Digital Interface

The ability of the CLRF IC Light to conform to the requirements specified in 3.10 shall be verified through demonstration.

4.18 Interface Cable

The ability of the CLRF IC Light to conform to the requirements specified in 3.11 shall be verified through examination and demonstration.

4.19 Field Carry Pouch

The ability of the CLRF IC Light to conform to the requirements specified in 3.12 shall be verified through examination and demonstration.

4.20 Tripod Soft Carry Pouch

The ability of the CLRF IC Light to conform to the requirements specified in 3.13 shall be verified through examination and demonstration.

4.21 Trigonometric Capabilities

The ability of the CLRF IC Light to conform to the requirements specified in 3.14 shall be verified through demonstration.

4.22 Battery Component

4.22.1 Interchangeable Battery Cartridges

The ability of the CLRF IC Light to conform to the requirements specified in 3.15.1 shall be verified through examination.

4.22.2 Rechargeable Batteries

The ability of the CLRF IC Light to conform to the requirements specified in 3.15.2 shall be verified through examination.

4.22.3 External Power

The ability of the CLRF IC Light to conform to the requirements specified in 3.15.3 shall be verified through demonstration.

4.22.4 System Damage

The ability of the CLRF IC Light to conform to the requirements specified in 3.15.4 shall be verified through demonstration.

4.22.5 Battery Status

The ability of the CLRF IC Light to conform to the requirements specified in 3.15.5 shall be verified through examination.

4.22.6 Battery Life

The ability of the CLRF IC Light to conform to the requirements specified in 3.15.6 shall be verified through demonstration.

4.22.7 Auto Power Shut-Off

The ability of the CLRF IC Light to conform to the requirements specified in 3.15.7 shall be verified through demonstration.

4.23 Boresight Alignment

The ability of the CLRF IC Light to conform to the requirements specified in 3.16 throughout the operating temperatures shall be verified through examination.

4.24 Tripod

The ability of the CLRF IC Light to conform to the requirements specified in 3.17 shall be verified through examination.

4.25 Tripod Size

The ability of the CLRF IC Light to conform to the requirements specified in 3.18 shall be verified through examination.

4.26 Viewing Optics

4.26.1 Eye Protection

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.1 shall be verified through examination.

4.26.2 Eyepiece

4.26.2.1 Diopter Adjustments

4.26.2.2 The ability of the CLRF IC Light to conform to the requirements specified in 3.19.2.1 shall be verified through examination.

4.26.2.3 Exit Pupil

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.2.2 shall be verified through examination.

4.26.2.4 Eye Relief

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.2.3 shall be verified through examination.

4.26.3 Reticle and Reticle Scales

4.26.3.1 Reticle Operation

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.3.1 shall be verified through demonstration.

4.26.3.2 Reticle Resolution

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.3.2 shall be verified through examination.

4.26.3.3 Reticle Pattern

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.3.3 shall be verified through examination.

4.26.4 Data Display

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.4 shall be verified through demonstration.

4.26.5 Legibility

4.26.5.1 Visibility

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.5.1 shall be verified through demonstration.

4.26.5.2 Display Viewing

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.5.2 shall be verified through examination.

4.26.5.3 Visual Display Features

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.5.3 shall be verified through demonstration.

4.26.6 Display Units

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.6 shall be verified through demonstration.

4.26.7 Display Precision

4.26.7.1 Precision of Data Display

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.7.1 shall be verified through examination.

4.26.7.2 Precision of Digital Data

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.7.2 shall be verified through demonstration.

4.26.8 Target Location Error Indicator

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.8 shall be verified through demonstration.

4.26.9 Safety Messages

4.26.9.1 Warning Messages

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.9.1 shall be verified through demonstration.

4.26.9.2 Danger Messages

The ability of the CLRF IC Light to conform to the requirements specified in 3.19.9.2 shall be verified through demonstration.

4.27 Built-In-Test (BIT)

4.27.1 BIT Accuracy

The ability of the CLRF IC Light to conform to the requirements specified in 3.20.1 shall be verified through demonstration and analysis.

4.27.2 BIT False Alarm Rate

The ability of the CLRF IC Light to conform to the requirements specified in 3.20.2 shall be verified through demonstration and analysis.

4.27.3 BIT Display

The ability of the CLRF IC Light to conform to the requirements specified in 3.20.3 shall be verified through demonstration.

4.28 Graceful Degradation

The ability of the CLRF IC Light to conform to the requirements specified in 3.21 shall be verified through analysis.

4.29 System Signature

4.29.1 Aural Detectability

The ability of the CLRF IC Light to conform to the requirements specified in 3.22.1 shall be verified through testing in accordance with requirement 2, Table 2-II of MIL-STD-1474D.

4.29.2 Stray Light Security

The ability of the CLRF IC Light to conform to the requirements specified in 3.22.2 shall be verified through demonstration.

4.30 Environmental Requirements

4.30.1 Chemical, Biological, Radiological and Nuclear (CBRN) Decontamination

The ability of the CLRF IC Light to conform to the requirements specified in 3.23.1 shall be verified through analysis.

4.30.2 Military Free Fall Operations-Altitude (Non-operational)

To determine conformance to 3.23.2, the CLRF IC Light shall be tested for atmospheric pressure related effects at altitude. Altitude testing shall be in its transit case at 7,620 m (25,000 ft) Mean Sea Level (MSL) at an altitude change rate of 8 m/s to 10 m/s (26 ft/s to 33 ft/s) for a period of 1 hour within the operating temperatures specified in 3.23.7 in accordance with MIL-STD-810G, Method 500.5, Procedure I.

4.30.3 Reserved

4.30.4 Immersion (30 ft)

To determine conformance to 3.23.4, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 512.5, Procedure I. The system shall be conditioned for 2 hours at 50°F above the water temperature.

4.30.5 Immersion (1.0 m)

To determine conformance to 3.23.5, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 512.5, Procedure I. The system shall be conditioned for 2 hours at 50°F above the water temperature.

4.30.6 Humidity

To determine conformance to 3.23.6, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 507.5, Procedure 2, for 10 cycles per Figure 507.5-7.

4.30.7 Operating Temperature

To determine conformance to 3.23.7, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 501.5, Procedure II (high temperature), and Method 502.5, Procedure II (low temperature). The system shall soak at 60 minutes at each temperature.

4.30.8 Storage Temperature

To determine conformance to 3.23.8, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 501.5, Procedure I (high temperature), and Method 502.5, Procedure I (low temperature). The system shall soak at 60 minutes at each temperature. The system shall not be in its field carry pouch or transit case while being tested.

4.30.9 Temperature Shock

To determine conformance to 3.23.9, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 503.5, Procedure I-B, between ambient air temperatures of -14°F and 122°F for a period of two (2) hours at each temperature.

4.30.10 Fungus

The ability of the CLRF IC Light to conform to the requirements specified in 3.23.10 shall be tested in accordance with MIL-STD-810G, Method 508.6.

4.30.11 Mechanical Vibration (Minimum Integrity)

To determine conformance to 3.23.11, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 514.6, Procedure I General Vibration. Random vibration levels shall be as identified in Figure 514.6E-1 of Annex E (General Minimum Integrity Exposure), with a test duration of one hour for each of three orthogonal axes. Inspect for damage and verify system operation after completion of testing.

4.30.12 Transportation Vibration (Loose Cargo)

To determine conformance to 3.23.12, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 514.6, Procedure II, Category 5 (Threshold). The total test time shall be three hours.

4.30.13 Rugged Handling

To determine conformance to 3.23.13, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 516.6, Procedure IV, with the exception that the drop height shall be 39 inches vice 48 inches. The CLRF IC Light shall undergo a drop test on all axes from a height of 39 inches onto concrete. The device does not have to be "on" during the test and optics can have a lens cover attached. The device should be fully operational following this test.

4.30.14 Sand and Dust

To determine conformance to 3.23.14, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 510.5, Procedure I. The duration for steps 3 and 7 shall be six hours and the air velocity shall be 1,750 ft/min. Optical surfaces and connectors are to be covered. A degraded finish is permissible. Markings shall still be legible.

4.30.15 Salt Fog

To determine conformance with 3.23.15, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 509.5. The CLRF IC Light shall be exposed for two 24-hour periods with a 24-hour drying time between each exposure. The CLRF IC Light shall not be operating during exposure. Optical surfaces and connectors shall be covered.

4.30.16 Explosive Atmosphere

To determine conformance with 3.23.16, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 511.5, Procedure I.

4.30.17 Electromagnetic Interference/Electromagnetic Vulnerability (EMI/EMV)

To determine conformance to section 3.23.17, the CLRF IC Light system shall be tested in accordance with MIL-STD-461F, RE102 (2 MHz - 18GHz), and RS103 (2 MHz - 18GHz).

4.30.18 Solar Radiation

To determine conformance with 3.23.18, the CLRF IC Light shall be tested in accordance with MIL-STD-810G, Method 505.5, Procedure I, subjected to a minimum of 3 solar diurnal cycles for the A1 environment.

4.31 Logistics

4.31.1 Mean Time Between Failure (MTBF).

The ability of the CLRF IC Light to conform to the requirements specified in 3.24.1 shall be verified through analysis.

4.31.2 Reserved

4.31.3 Preventive Maintenance

The ability of the CLRF IC Light to conform to the requirements specified in 3.24.3 shall be verified through demonstration.

4.31.4 Reserved

4.32 Human Systems Integration

4.32.1 Control Accessibility

The ability of the CLRF IC Light to conform to the requirements specified in 3.25.1 shall be verified through demonstration.

4.32.2 Power Controls

The ability of the CLRF IC Light to conform to the requirements specified in 3.25.2 shall be verified through demonstration.

4.32.3 Firing Controls

The ability of the CLRF IC Light to conform to the requirements specified in 3.25.3 shall be verified through demonstration.

4.32.4 Operation

The ability of the CLRF IC Light to conform to the requirements specified in 3.25.4 shall be verified through demonstration.

4.33 Safety

4.33.1 Battery Safety Requirements

The ability of the CLRF IC Light to conform to the requirements specified in 3.26.1 shall be verified through a combination of analysis, demonstration and examination.

4.33.2 Safety Assessment

The ability of the CLRF IC Light to conform to the requirements specified in 3.26.2 shall be verified through a combination of analysis, demonstration and examination.

4.34 Manufacturing

4.34.1 System Marking

The ability of the CLRF IC Light to conform to the requirements specified in 3.27.1 shall be verified through examination.

4.34.2 Transit Case Marking

The ability of the CLRF IC Light to conform to the requirements specified in 3.27.2 shall be verified through examination.

4.34.3 Workmanship

The ability of the CLRF IC Light to conform to the requirements specified in 3.27.3 shall be verified through examination.

4.34.4 Materials Selection

The ability of the CLRF IC Light to conform to the requirements specified in 3.27.4 shall be verified through examination.

5. Packaging

For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of material is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. Notes

6.1 Intended Use

The CLRF IC Light covered by this specification is intended for use by USMC infantry units, artillery units, reconnaissance personnel and supporting arms observers, spotters, and controllers to determine targeting coordinates of battlefield targets for conventional or GPS guided munitions.

6.2 First Article

When first article inspection is required, the Government Contracting Officer shall provide specific direction to offerers regarding the specific type of systems to undergo first article inspection, (e.g., a first production item, sample systems from the current production line, or a standard production item from the contractor's current inventory), the number of items to undergo first article inspection and how they are to be selected. The Government Contracting Officer should also include specific instructions in the acquisition document regarding approval of first article test procedures and results and the disposition of first article systems / components. Invitations for bids should stipulate that the Government reserves the right to waive the requirement for first article inspection (in whole or in part) to those bidders offering a product which has been previously acquired or tested by the Government.

6.3 Definitions

Target Location Error (TLE) is defined as the radius of a circle in which 50% of the calculated radial target location errors are encircled.

A mil is defined as $1/6400^{\text{th}}$ of a full circle. This is not to be confused with a milliradian which is defined based upon pi.

An operational mission failure for the CLRF IC Light is defined as any failure which precludes one or more of the following functions: self location, range finding, azimuth determination and target observation.

Sterile magnetic environment is defined as an environment free of any local magnetic disturbances.

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO. B. EXHIBIT C. CATEGORY: TDP ___ TM ___ OTHER X

D. SYSTEM/ITEM CLRF IC E. CONTRACT/PR NO. F. CONTRACTOR

1. DATA ITEM NO. 2. TITLE OF DATA ITEM 3. SUBTITLE
A003 PRESENTATION MATERIALS

4. AUTHORITY (Data Acquisition Document No.) 5. CONTRACT REFERENCE 6. REQUIRING OFFICE
DI-ADMN-81373 SOW para 3.1.2 MARCORSSYSCOM (PM FSS)

7. DD 250 REQ LT 8. DIST STATEMENT 10. FREQUENCY See Block 16 12. DATE OF FIRST SUBMISSION See Block 16 14. DISTRIBUTION
8. APP CODE See Block 16 11. AS OF DATE 13. DATE OF SUBSEQUENT SUBMISSION See Block 16 a. ADDRESSEE b. COPIES
Draft Final Reg Repro

16. REMARKS				14. DISTRIBUTION				
				b. COPIES				
				a. ADDRESSEE		Final		
						Reg	Repro	
<p>Block 9 - The following information shall be included on the deliverable: DISTRIBUTION STATEMENT D: Distribution authorized to the Department of Defense and U.S. DoD contractors only for Administrative or Operational Use as of Aug 2011. Other requests shall be referred to Marine Corps Systems Command.</p> <p>Block 10 - Presentation materials shall be added, changed, or revised as required to provide the Government with complete and accurate data.</p> <p>Block 12 - Submit 15 days after each conference, meeting, or review. The Government requires 10 calendar days to review.</p> <p>Block 13 - Presentation materials shall be added, changed, or revised as required to provide the Government with complete and accurate data.</p> <p>Block 14 - Delivery media shall be MS Word (for Windows), PowerPoint, and/or multi-media document(s) via e mail or on CD-ROM.</p>				MCSC PM FSS				
				NEBEL		1	0	1
				TWIGG		1	0	1
				LEAMAN		1	0	1
				GARVEY		1	0	1
				ESTEP		1	0	1
				JONES		1	0	1
				MCLBA PM FSS				
				MURRAY		0	0	1
				BRUCE		0	0	1
				NSWCDD G31				
				SANDERS		1	0	1
				MCSC CT (PCO)				
				LOBA		Cover Letter		

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

G. PREPARED BY: Jeff Nebel H. DATE: 09/16/2011 I. APPROVED BY: Keith U. Davis J. DATE: 16 September 2011

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO. B. EXHIBIT C. CATEGORY: TDP ___ TM ___ OTHER X

D. SYSTEM/ITEM CLRF IC E. CONTRACT/PR NO. F. CONTRACTOR

1. DATA ITEM NO. A009 2. TITLE OF DATA ITEM DESIGN REVIEW INFORMATION PACKAGE 3. SUBTITLE CRITICAL DESIGN REVIEW

4. AUTHORITY (Data Acquisition Document No.) DI-SESS-81757A 5. CONTRACT REFERENCE SOW para 3.1.5 6. REQUIRING OFFICE MARCORSSYSCOM (PM FSS)

7. DD 250 REQ LT 9. DIST STATEMENT See Block 16 10. FREQUENCY See Block 16 12. DATE OF FIRST SUBMISSION See Block 16 14. DISTRIBUTION a. ADDRESSEE b. COPIES Draft Reg Final Repro

<p>16. REMARKS</p> <p>Block 4 - Reference only Section 8 in DI-SESS-81757.</p> <p>Block 9 - The following information shall be included on the deliverable: DISTRIBUTION STATEMENT D: Distribution authorized to the Department of Defense and U.S. DoD contractors only for Administrative or Operational Use as of Aug 2011. Other requests shall be referred to Marine Corps Systems Command.</p> <p>Block 10 - The design review information package shall be added, changed, or revised as required to provide the Government with complete and accurate data.</p> <p>Block 12 - Submit 30 days prior to CDR.</p> <p>Block 13 - The Government requires 15 calendar days to review. The contractor shall submit final 10 calendar days after receipt of Government comments.</p> <p>Block 14 - Delivery media shall be MS Word (for Windows), PowerPoint, and/or multi-media document(s) via e mail or on CD-ROM.</p>	MCSC PM FSS			
	NEBEL	1	0	1
	TWIGG	1	0	1
	LEAMAN	1	0	1
	GARVEY	1	0	1
	ESTEP	1	0	1
	JONES	1	0	1
	MCLBA PM FSS			
	MURRAY	0	0	1
	BRUCE	0	0	1
	NSWCDD G31			
	SANDERS	1	0	1
	MCSC CT (PCO)			
	LOBA	Cover Letter		
	15. TOTAL ----->	0	0	8

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

G. PREPARED BY Jeff Nebel H. DATE 09/16/2011 I. APPROVED BY Keith L. Davis J. DATE 16 September 2011

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO. B. EXHIBIT C. CATEGORY: TDP ___ TM ___ OTHER X

D. SYSTEM/ITEM CLR FIC E. CONTRACT/PR NO. F. CONTRACTOR

1. DATA ITEM NO. 2. TITLE OF DATA ITEM 3. SUBTITLE
A00C TEST PROCEDURE PRODUCTION REPRESENTATIVE SYSTEM TEST

4. AUTHORITY (Data Acquisition Document No.) 5. CONTRACT REFERENCE 6. REQUIRING OFFICE
DI-NDTI-80603A SOW para 3.2.3 MARCORSSYSCOM (PM FSS)

7. DD 250 REQ LT 9. DIST STATEMENT 10. FREQUENCY See Block 16 12. DATE OF FIRST SUBMISSION See Block 16 14. DISTRIBUTION
8. APP CODE 11. AS OF DATE 13. DATE OF SUBSEQUENT SUBMISSION See Block 16
a. ADDRESSEE b. COPIES
Draft Reg Final

<p>16. REMARKS</p> <p>Block 9 - The following information shall be included on the deliverable: DISTRIBUTION STATEMENT D: Distribution authorized to the Department of Defense and U.S. DoD contractors only for Administrative or Operational Use as of Aug 2011. Other requests shall be referred to Marine Corps Systems Command.</p> <p>Block 10 - Test Procedure shall be changed or revised as required to provide the Government with complete and accurate data.</p> <p>Block 12 - Submit 30 days prior to the test.</p> <p>Block 13 - Government to review and provide comments within 15 days of receipt. The contractor shall submit final 5 days after receipt of Government comments.</p> <p>Block 14 - Delivery media shall be MS Word (for Windows) document via e mail or on CD-ROM.</p>	MCSC PM FSS			
	NEBEL	1	0	1
	TWIGG	1	0	1
	LEAMAN	1	0	1
	GARVEY	1	0	1
	NSWCDD G31			
	CULP	1	0	1
	SANDERS	1	0	1
	MCSC CT (PCO)			
	LOBA			Cover Letter
	15. TOTAL	6	0	6

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

G. PREPARED BY: Jeff Nebel H. DATE: 09/16/2011 I. APPROVED BY: Keith I. Davis J. DATE: 16 September 2011

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

Form Approved
OMB No. 0704-0188

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A. CONTRACT LINE ITEM NO. B. EXHIBIT C. CATEGORY: TDP ___ TM ___ OTHER X

D. SYSTEM/ITEM CLRF IC E. CONTRACT/PR NO. F. CONTRACTOR

1. DATA ITEM NO. 2. TITLE OF DATA ITEM 3. SUBTITLE
A00U SAFETY ASSESSMENT REPORT

4. AUTHORITY (Data Acquisition Document No.) 5. CONTRACT REFERENCE 6. REQUIRING OFFICE
DI-SAFT-80102B SOW para 3.7.3 MARCORSYSCOM (PM FSS)

7. DD 250 REQ LT 9. DIST STATEMENT 10. FREQUENCY See Block 16 12. DATE OF FIRST SUBMISSION See Block 16 14. DISTRIBUTION

8. APP CODE 9. DIST STATEMENT See Block 16 11. AS OF DATE 13. DATE OF SUBSEQUENT SUBMISSION See Block 16 14. DISTRIBUTION a. ADDRESSEE b. COPIES

16. REMARKS	a. ADDRESSEE	b. COPIES		
		Draft	Final Reg	Final Repr
<p>Block 9 - The following information shall be included on the deliverable: DISTRIBUTION STATEMENT D: Distribution authorized to the Department of Defense and U.S. DoD contractors only for Administrative or Operational Use as of Aug 2011. Other requests shall be referred to Marine Corps Systems Command.</p> <p>Block 10 - SAR shall be changed or revised yearly to provide the Government with complete and accurate data.</p> <p>Block 12 - Submit 12 months after contract award.</p> <p>Block 13 - The Government requires 30 calendar days for review. The contractor shall submit final 10 calendar days after receipt of Government comments.</p> <p>Block 14 - Delivery media shall be MS Word (for Windows) document via e mail or on CD-ROM.</p>	MCSC PM FSS			
	NEBEL	1	0	1
	TWIGG	1	0	1
	LEAMAN	1	0	1
	GARVEY	1	0	1
	ESTEP	1	0	1
	JONES	1	0	1
	MCLBA PM FSS			
	MURRAY	1	0	1
	BRUCE	1	0	1
	NSWCDD G31			
	SANDERS	1	0	1
	NSWCDD G73			
	HYNSON	1	0	1
	MCSC CT (PCO)			
LOBA		Cover Letter		
15. TOTAL ----->		7	0	7

17. PRICE GROUP
18. ESTIMATED TOTAL PRICE

G. PREPARED BY: Jeff Nebel H. DATE: 09/16/2011 I. APPROVED BY: Keith Davis J. DATE: 16 September 2011

CONTRACT DATA REQUIREMENTS LIST
(1 Data Item)

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A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY: TDP ___ TM ___ OTHER <u>X</u>
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D. SYSTEM/ITEM CLRF IC	E. CONTRACT/PR NO.	F. CONTRACTOR
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1. DATA ITEM NO. A010	2. TITLE OF DATA ITEM MAINTENANCE SUPPORT PLAN	3. SUBTITLE
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4. AUTHORITY (Data Acquisition Document No.) DI-ILSS-81225	5. CONTRACT REFERENCE SOW para 3.8.3	6. REQUIRING OFFICE MARCORSYSCOM (PM FSS)
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7. DD 250 REQ LT	9. DIST STATEMENT See Block 16	10. FREQUENCY See Block 16	12. DATE OF FIRST SUBMISSION See Block 16	14. DISTRIBUTION
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8. APP CODE	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION See Block 16	b. COPIES	
			Draft	Final Reg Repr

16. REMARKS Block 4 - This plan may use a bulletized format when describing the maintenance support summary. Block 9 - The following information shall be included on the deliverable: DISTRIBUTION STATEMENT D: Distribution authorized to the Department of Defense and U.S. DoD contractors only for Administrative or Operational Use as of Aug 2011. Other requests shall be referred to Marine Corps Systems Command. Block 10 - The maintenance support plan shall be changed or revised as required to provide the Government with complete and accurate data. Block 12 - Submit 30 days prior to CDR. Block 13 - The Government requires 15 calendar days for review. The contractor shall submit final 5 calendar days after receipt of Government comments. Block 14 - Delivery media shall be MS Word (for Windows) document via e mail or on CD-ROM.	MCSC PM FSS			
	NEBEL	1	0	1
	TWIGG	1	0	1
	LEAMAN	1	0	1
	GARVEY	1	0	1
	ESTEP	1	0	1
	JONES	1	0	1
	MCLBA PM FSS			
	MURRAY	1	0	1
	BRUCE	1	0	1
	NSWCDD G31			
	SANDERS	1	0	1
	MCSC CT (PCO)			
	LOBA			Cover Letter
	MCSC PM FSS			

17. PRICE GROUP

18. ESTIMATED TOTAL PRICE

G. PREPARED BY Jeff Nebel	H. DATE 09/16/201	I. APPROVED BY Keith L. Davis	J. DATE 16 September 201
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