

<b>SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS</b> OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, AND 30				1. REQUISITION NUMBER		PAGE 1 OF 60	
2. CONTRACT NO. M67854-09-D-1017		3. AWARD/EFFECTIVE DATE 27-Jan-2009		4. ORDER NUMBER		5. SOLICITATION NUMBER M67854-08-R-1076	
7. FOR SOLICITATION INFORMATION CALL:		a. NAME CHARLES DUNAWAY				b. TELEPHONE NUMBER (No Collect Calls) 703-432-3555	
9. ISSUED BY MARCORSYSCOM IWS ATTN: EDDIE.TAVARES@USMC.MIL BLDG 2200 LESTER ST QUANTICO VA 22134  TEL: 703-432-3632 FAX: 703-432-3526		CODE M67854		10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED <input type="checkbox"/> SET ASIDE: % FOR <input type="checkbox"/> SB <input type="checkbox"/> HUBZONE SB <input type="checkbox"/> 8(A) <input type="checkbox"/> SVC-DISABLED VET-OWNED SB <input type="checkbox"/> EMERGING SB SIZE STD: 500 NAICS: 333314		11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE	
						12. DISCOUNT TERMS Net 30 Days	
						<input checked="" type="checkbox"/> 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)	
						13b. RATING DO-A5	
						14. METHOD OF SOLICITATION <input type="checkbox"/> RFQ <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP	
15. DELIVER TO  <b>SEE SCHEDULE</b>		CODE		16. ADMINISTERED BY DCMA TEXAS 2501 W. UNIVERSITY DRIVE, MS 8010 MCKINNEY TX 75071		CODE S4402A	
17a. CONTRACTOR/OFFEROR ELCAN OPTICAL TECHNOLOGIES 1601 N PLANO RD RICHARDSON TX 75081-1913  TEL. 972-344-8085		CODE 1SDY4		18a. PAYMENT WILL BE MADE BY DFAS - COLUMBUS CENTER WEST ENTITLEMENT OPERATIONS PO BOX 182238 COLUMBUS OH 43218-2381		CODE HQ0339	
		FACILITY CODE					
<input type="checkbox"/> 17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER				18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a. UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM			
19. ITEM NO.		20. SCHEDULE OF SUPPLIES/ SERVICES		21. QUANTITY		22. UNIT	
						23. UNIT PRICE	
						24. AMOUNT	
		<b>SEE SCHEDULE</b>					
25. ACCOUNTING AND APPROPRIATION DATA						26. TOTAL AWARD AMOUNT (For Govt. Use Only)  <b>\$0.00</b>	
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3, 52.212-5 ARE ATTACHED. ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED							
<input type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4, FAR 52.212-5 IS ATTACHED. ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED							
28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 1 COPIES <input checked="" type="checkbox"/> TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.  REF: ELCAN Proposal MRTB640 23 DEC				29. AWARD OF CONTRACT: REFERENCE <input type="checkbox"/> OFFER DATED . YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS: SEE SCHEDULE			
30a. SIGNATURE OF OFFEROR/CONTRACTOR				31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)  <i>John J. Wahl</i>		31c. DATE SIGNED  26-Jan-2009	
30b. NAME AND TITLE OF SIGNER (TYPE OR PRINT)		30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (TYPE OR PRINT) JOHN J. WAHL / CONTRACTING OFFICER TEL: 703-432-3568 EMAIL: john.wahl@usmc.mil			

**SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS  
(CONTINUED)**

PAGE 2 OF 60

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/ SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	SEE SCHEDULE				

32a. QUANTITY IN COLUMN 21 HAS BEEN

☐ RECEIVED ☐ INSPECTED ☐ ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: \_\_\_\_\_

32b. SIGNATURE OF AUTHORIZED GOVERNMENT  
REPRESENTATIVE

32c. DATE

32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT  
REPRESENTATIVE

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE

32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER

34. VOUCHER NUMBER

35. AMOUNT VERIFIED  
CORRECT FOR

36. PAYMENT

☐ COMPLETE ☐ PARTIAL ☐ FINAL

37. CHECK NUMBER

☐ PARTIAL ☐ FINAL

38. S/R ACCOUNT NUMBER

39. S/R VOUCHER NUMBER

40. PAID BY

41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT

42a. RECEIVED BY (Print)

41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER

41c. DATE

42b. RECEIVED AT (Location)

42c. DATE REC'D (YY/MM/DD)

42d. TOTAL CONTAINERS

## Section SF 1449 - CONTINUATION SHEET

SECTION B

The Government's obligated minimum purchase for CLIN 0001 is 25 MRTB (Phantom IR+) systems to be procured during the first year of the contract. The maximum purchase for CLIN 0001 is 10,000 MRTB (Phantom IR+) systems for the life of the contract. All other CLINS have a Government-obligated minimum of zero and a maximum of 10,000. The cumulative total of all delivery orders placed under this contract shall not to exceed \$180,000,000.00 for the life of the contract.

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT	
0001	MRTB (PhantomIR+) FFP MRTB and associated equipment over-packed with soft case. Associated equipment includes, mount, view and objective lens covers, two sets of batteries, light-limiting eye piece cover, operator manual, quick reference card, cleaning kit, and standard commercial & storage warranty. All Government approved technical data, operator/maintainer training, technical manuals, and any special hand tools shall be delivered concurrently with the delivery of this CLIN.	10,000	Each	UNDEFINED	\$0.00	
	Quantity	Year 1	Year 2	Year 3	Year 4	Year 5
	25	(b) (4)				
	100-200					
	201-500					
	501-1000					
	1001-2000					
	2001-3500					
	3501-5000					
	FOB: Destination					

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MAX  
NET AMT

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\$0.00

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0002	Verification and Demonstration FFP In accordance to SOW 3.11.3 Production Acceptance Test (PAT). FOB: Destination	UNDEFINED		UNDEFINED	\$0.00
MAX NET AMT					\$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AC	Supportability Demonstration FFP Supportability Demonstration in accordance with Statement of Work, Paragraphs 3.11.5, 3.11.5.1, & 3.11.5.2. The Government's intent is to have the initial delivery order for CLIN 0001 be met no later than ninety (90) calendar days post award of initial Delivery Order.  Unit Price of SCLIN 0002AA: (b) (4)  CDRL's B009 TEST PLAN AND TEST PROCEDURE B010 TEST/INSPECTION REPORT FOB: Destination	UNDEFINED	Lot	UNDEFINED	\$0.00
NET AMT					\$0.00



ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AB	Assessment of Initial Production Units FFP Assessment of Initial Contract Production Units shall be in accordance with Statement of Work, Paragraph 3.11.2. It's the Government's intent for the Assessment of Initial Production Units to be ready for inspection and acceptance no later than seventy five (75) days post award of initial delivery order to CLIN 0001  Unit Price SCLIN 0002AB: (b) (4)  CDRL's B009 TEST PLAN AND TEST PROCEDURE B010 TEST/INSPECTION REPORT FOB: Destination		Lot		\$0.00
NET AMT					\$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AA	Production Acceptance Test (PAT) FFP Production Acceptance Test shall be in accordance with Statement of Work, Paragraph 3.11.3. The Government's intent is for this to be met no later than 75 calendar days post award of initial delivery order to CLIN 0001  Unit Price SCLIN 0002AB: (b) (4)  CDRL's B009 TEST PLAN AND TEST PROCEDURE B010 TEST/INSPECTION REPORT FOB: Destination		Lot		\$0.00
NET AMT					\$0.00

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0003		UNDEFINED	Lot	UNDEFINED	\$0.00

CLS

FFP

Contractor shall furnish all tools, materials, equipment, facilities and personnel necessary to provide repairs on the MRTB in accordance with Statement of Work, Paragraph 3.12.4.1

The individual non-warranty repair pricing shall be incorporated from attachments 2 & 4 "CLS pricing & Parts list".

FOB: Destination

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MAX NET AMT	\$0.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004			Lot		\$0.00

Contractor Logistics Support (CLS) Setup

FFP

Contractor Logistics Support Setup - CLS Setup shall be limited to those materials, spare parts and/or systems required by the contractor to setup CLS and ensure turnaround times are met as per SOW Para 3.12.4.5. Actual repairs shall not be included in CLS Setup. Once CLS is established, it shall be available for the duration of the contract or until CLS is terminated by the government. All residual repair parts and maintenance float items procured by the government under this CLIN as noted in attachment 3 in support of CLS shall be delivered to the government upon termination of CLS

Unit Price: (b) (4)

FOB: Destination

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NET AMT	\$0.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005	Commercial-Off-The-Shelf (COTS) Manual FFP CDRL F001 COMMERCIAL-OFF-THE-SHELF (COTS) MANUAL AND ASSOCIATED SUPPLEMENTAL DATA  FOB: Destination	UNDEFINED		UNDEFINED	\$0.00
<hr/>					
NET AMT					\$0.00

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0005AA	Maintenance Manual FFP Maintenance Manual will be provided in accordance with SOW para 3.15.1 This is to be met no later than 90 calendar days post award of initial delivery order to CLIN 0002AB  Unit Price SCLIN 0005AA: (b) (4)  CDRL F001 COMMERCIAL-OFF-THE-SHELF (COTS) MANUAL AND ASSOCIATED SUPPLEMENTAL DATA FOB: Destination	UNDEFINED	Each	UNDEFINED	\$0.00
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MAX NET AMT					\$0.00

ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0005AB		UNDEFINED	Each	UNDEFINED	\$0.00

Operators Manual  
FFP

Operators Manual will be provided in accordance with SOW para 3.15.1 This to be met no later than 30 calendar days post award of initial delivery order to CLIN 0001

Unit Price SCLIN 0005AB: (b) (4)

CDRL F001

COMMERCIAL-OFF-THE-SHELF (COTS) MANUAL AND ASSOCIATED  
SUPPLEMENTAL DATA

FOB: Destination

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MAX NET AMT	\$0.00
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ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0006		UNDEFINED		UNDEFINED	\$0.00

Maintenance Training  
FFP

The contractor shall provide a maintenance training program in accordance with MIL-PRF-29612, CDRL's H001, H002, H003, and Statement of Work, Paragraph 3.17.

FOB: Destination

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MAX NET AMT	\$0.00
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ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0006AA		UNDEFINED	Each	UNDEFINED	\$0.00

Maintenance Training (East)

FFP

Maintenance Training conducted on the East Coast

Unit Price SCLIN 0006AA: (b) (4)

CDRL's:

H001 TRAINING PROGRAM STRUCTURE DOCUMENT

H002 INSTRUCTIONAL PERFORMANCE REQUIREMENTS DOCUMENT

H003 TRAINING CONDUCT SUPPORT DOCUMENT

FOB: Destination

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MAX NET AMT	\$0.00
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ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0006AB		UNDEFINED	Each	UNDEFINED	\$0.00

Maintenance Training (West)

FFP

Maintenance Training conducted on the West Coast

Unit Price SCLIN 0006AB: (b) (4)

CDRL's:

H001 TRAINING PROGRAM STRUCTURE DOCUMENT

H002 INSTRUCTIONAL PERFORMANCE REQUIREMENTS DOCUMENT

H003 TRAINING CONDUCT SUPPORT DOCUMENT

FOB: Destination

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MAX NET AMT	\$0.00
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ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY UNDEFINED	UNIT	UNIT PRICE	MAX AMOUNT
0007	Parts List FFP Spare parts, including repair parts, major components, and accessories associated with the MRTB as per Attachment 4 "Spare Parts List"		Lot	UNDEFINED	\$0.00

FOB: Destination

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MAX NET AMT	\$0.00
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ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY UNDEFINED	UNIT	UNIT PRICE	MAX AMOUNT
0008	Fault Isolation/Calibration Data Upload FFP Fault Isolation/Calibration Data Upload Set (Not Separately Priced)		Each		NSP

CDRL  
G002 CALIBRATION AND MEASUREMENT REQUIREMENTS SUMMARY  
(CMRS)  
FOB: Destination

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MAX NET AMT
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0009		UNDEFINED			NSP

Contract Data Requirement List (CDRL)

FFP

The contractor shall submit the following, (Not Separately Priced) CDRL's in accordance with Blocks 10 & 12 of each individual CDRL:

CDRL:

A001 CONTRACTOR'S PROGRESS, STATUS AND MANAGEMENT REPORT

A002 RECEIPT OF GOVERNMENT MATERIEL REPORT

B001 RELIABILITY PREDICTION AND DOCUMENTATION OF SUPPORTING DATA

B002 FAILURE SUMMARY AND ANALYSIS REPORT AND FAILURE ANALYSIS AND CORRECTIVE ACTION REPORT

B003 SAFETY ASSESSMENT REPORT (SAR)

B004 CONFIGURATION STATUS ACCOUNTING INFORMATION PARTS MANAGEMENT PROGRAM

B005 ENGINEERING CHANGE PROPOSAL (ECP)

B006 REQUEST FOR DEVIATION (RFD)

B007 TECHNICAL REPORT - STUDY/SERVICES

B008 SOURCE DATA FOR FORECASTING DMSMS

D001 LOGISTICS MANAGEMENT INFORMATION (LMI) SUMMARIES

D002 REQUEST FOR NOMENCLATURE

G001 MAINTENANCE, TEST AND SUPPORT EQUIPMENT LIST

I001 PRESERVATION AND PACKAGING DATA

FOB: Destination

NET AMT

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\$0.00



ITEM NO	SUPPLIES/SERVICES	MAX QUANTITY	UNIT	UNIT PRICE	MAX AMOUNT
0010		UNDEFINED	Each	UNDEFINED	\$0.00

Reliability and Maintainability Program  
FFP  
Reliability and Maintainability Program IAW SOW 3.5.1 CDRL B001  
RELIABILITY PREDICTION AND DOCUMENTATION OF SUPPORTING  
DATA

Unit Price CLIN 0010: (b) (4)  
FOB: Destination

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MAX NET AMT	\$0.00
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## INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Origin	Government	Destination	Government
0002	Origin	Government	Destination	Government
0002AA	Origin	Government	Destination	Government
0002AB	Origin	Government	Destination	Government
0002AC	Origin	Government	Destination	Government
0003	Origin	Government	Destination	Government
0004	Origin	Government	Destination	Government
0005	Origin	Government	Destination	Government
0005AA	Origin	Government	Destination	Government
0005AB	Origin	Government	Destination	Government
0006	Origin	Government	Destination	Government
0006AA	Origin	Government	Destination	Government
0006AB	Origin	Government	Destination	Government
0007	Origin	Government	Destination	Government
0008	Origin	Government	Destination	Government
0009	Origin	Government	Destination	Government
0010	Origin	Government	Destination	Government

## CLAUSES INCORPORATED BY REFERENCE

52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6 Alt I	Restrictions On Subcontractor Sales To The Government (Sep 2006) -- Alternate I	OCT 1995
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	SEP 2006
52.211-17	Delivery of Excess Quantities	SEP 1989
52.216-18	Ordering	OCT 1995
52.227-1	Authorization and Consent	DEC 2007
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	DEC 2007
52.242-13	Bankruptcy	JUL 1995
52.242-15	Stop-Work Order	AUG 1989
52.247-34	F.O.B. Destination	NOV 1991
52.247-48	F.O.B. Destination--Evidence Of Shipment	FEB 1999
52.253-1	Computer Generated Forms	JAN 1991
252.203-7002	Display Of DOD Hotline Poster	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	SEP 2007
252.205-7000	Provision Of Information To Cooperative Agreement Holders	DEC 1991
252.209-7004	Subcontracting With Firms That Are Owned or Controlled By The Government of a Terrorist Country	DEC 2006
252.211-7003	Item Identification and Valuation	JUN 2005
252.225-7001	Buy American Act And Balance Of Payments Program	JUN 2005
252.225-7002	Qualifying Country Sources As Subcontractors	APR 2003
252.225-7012	Preference For Certain Domestic Commodities	JAN 2007
252.225-7013	Duty-Free Entry	OCT 2006
252.225-7014 Alt I	Preference For Domestic Specialty Metals (Jun 2005) - Alternate I	OCT 2007
252.226-7001	Utilization of Indian Organizations and Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns	SEP 2004
252.232-7003	Electronic Submission of Payment Requests	MAR 2007
252.232-7010	Levies on Contract Payments	DEC 2006
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.246-7000	Material Inspection And Receiving Report	JAN 2008
252.247-7023	Transportation of Supplies by Sea	MAY 2002
252.247-7024	Notification Of Transportation Of Supplies By Sea	MAR 2000

## CLAUSES INCORPORATED BY FULL TEXT

52.212-4 CONTRACT TERMS AND CONDITIONS-- COMMERCIAL ITEMS (FEB 2007)

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. If repair/replacement or reperformance will not correct the defects or is not possible, the Government may seek an equitable price reduction or adequate consideration for acceptance of nonconforming supplies or services. The Government must exercise its post-acceptance rights (1) within a reasonable time after the defect was discovered or should have been discovered; and (2) before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Assignment. The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (e.g., use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) Definitions. The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement or any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) Invoice. (1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include--

(i) Name and address of the Contractor;

(ii) Invoice date and number;

(iii) Contract number, contract line item number and, if applicable, the order number;

(iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;

(v) Shipping number and date of shipment, including the bill of lading number and weight of shipment if shipped on Government bill of lading;

(vi) Terms of any discount for prompt payment offered;

(vii) Name and address of official to whom payment is to be sent;

(viii) Name, title, and phone number of person to notify in event of defective invoice; and

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(2) Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR part 1315.

(h) Patent indemnity. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) Payment.--

(1) Items accepted. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract.

(2) Prompt payment. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and prompt payment regulations at 5 CFR part 1315.

(3) Electronic Funds Transfer (EFT). If the Government makes payment by EFT, see 52.212-5(b) for the appropriate EFT clause.

(4) Discount. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(5) Overpayments. If the Contractor becomes aware of a duplicate contract financing or invoice payment or that the Government has otherwise overpaid on a contract financing or invoice payment, the Contractor shall immediately notify the Contracting Officer and request instructions for disposition of the overpayment.

(j) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) Limitation of liability. Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 3701, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order: (1) the schedule of supplies/services; (2) the Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause; (3) the clause at 52.212-5; (4) addenda to this solicitation or contract, including any license agreements for computer software; (5) solicitation provisions if this is a solicitation; (6) other paragraphs of this clause; (7) the Standard Form 1449; (8) other documents, exhibits, and attachments; and (9) the specification.

(t) Central Contractor Registration (CCR). (1) Unless exempted by an addendum to this contract, the Contractor is responsible during performance and through final payment of any contract for the accuracy and completeness of the data within the CCR database, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to review and update on an annual basis from the date of initial registration or subsequent updates its information in the CCR database to ensure it is current, accurate and complete. Updating information in the CCR does not alter the terms and conditions of this contract and is not a substitute for a properly executed contractual document.

(2)(i) If a Contractor has legally changed its business name, "doing business as" name, or division name (whichever is shown on the contract), or has transferred the assets used in performing the contract, but has not completed the necessary requirements regarding novation and change-of-name agreements in FAR subpart 42.12, the Contractor

shall provide the responsible Contracting Officer a minimum of one business day's written notification of its intention to (A) change the name in the CCR database; (B) comply with the requirements of subpart 42.12; and (C) agree in writing to the timeline and procedures specified by the responsible Contracting Officer. The Contractor must provide with the notification sufficient documentation to support the legally changed name.

(ii) If the Contractor fails to comply with the requirements of paragraph (t)(2)(i) of this clause, or fails to perform the agreement at paragraph (t)(2)(i)(C) of this clause, and, in the absence of a properly executed novation or change-of-name agreement, the CCR information that shows the Contractor to be other than the Contractor indicated in the contract will be considered to be incorrect information within the meaning of the "Suspension of Payment" paragraph of the electronic funds transfer (EFT) clause of this contract.

(3) The Contractor shall not change the name or address for EFT payments or manual payments, as appropriate, in the CCR record to reflect an assignee for the purpose of assignment of claims (see Subpart 32.8, Assignment of Claims). Assignees shall be separately registered in the CCR database. Information provided to the Contractor's CCR record that indicates payments, including those made by EFT, to an ultimate recipient other than that Contractor will be considered to be incorrect information within the meaning of the "Suspension of payment" paragraph of the EFT clause of this contract.

(4) Offerors and Contractors may obtain information on registration and annual confirmation requirements via the internet at <http://www.ccr.gov> or by calling 1-888-227-2423 or 269-961-5757.

(End of clause)

#### CLAUSES INCORPORATED BY FULL TEXT

##### 52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS--COMMERCIAL ITEMS (OCT 2008)

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.233-3, Protest After Award (AUG 1996) (31 U.S.C. 3553).

(2) 52.233-4, Applicable Law for Breach of Contract Claim (OCT 2004) (Pub. L. 108-77, 108-78).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items: (Contracting Officer check as appropriate.)

\_\_\_ (1) 52.203-6, Restrictions on Subcontractor Sales to the Government (SEP 2006), with Alternate I (OCT 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).

\_\_\_ (2) 52.219-3, Notice of HUBZone Small Business Set-Aside (Jan 1999) (15 U.S.C. 657a).

X (3) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (JUL 2005) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).

\_\_\_ (4) [Removed].



- ☐ (5)(i) 52.219-6, Notice of Total Small Business Set-Aside (JUNE 2003) (15 U.S.C. 644).
- ☐ (ii) Alternate I (OCT 1995) of 52.219-6.
- ☐ (iii) Alternate II (MAR 2004) of 52.219-6.
- ☐ (6)(i) 52.219-7, Notice of Partial Small Business Set-Aside (JUNE 2003) (15 U.S.C. 644).
- ☐ (ii) Alternate I (OCT 1995) of 52.219-7.
- ☐ (iii) Alternate II (MAR 2004) of 52.219-7.
- ☒ (7) 52.219-8, Utilization of Small Business Concerns (MAY 2004) (15 U.S.C. 637 (d)(2) and (3)).
- ☐ (8)(i) 52.219-9, Small Business Subcontracting Plan (APR 2008) (15 U.S.C. 637(d)(4)).
- ☐ (ii) Alternate I (OCT 2001) of 52.219-9
- ☐ (iii) Alternate II (OCT 2001) of 52.219-9.
- ☐ (9) 52.219-14, Limitations on Subcontracting (DEC 1996) (15 U.S.C. 637(a)(14)).
- ☐ (10) 52.219-16, Liquidated Damages--Subcontracting Plan (JAN 1999) (15 U.S.C. 637(d)(4)(F)(i)).
- ☐ (11)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (OCT 2008) (10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
- ☐ (ii) Alternate I (JUNE 2003) of 52.219-23.
- ☐ (12) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (APR 2008) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- ☐ (13) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (OCT 2000) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- ☐ (14) 52.219-27, Notice of Total Service-Disabled Veteran-Owned Small Business Set-Aside (MAY 2004) (U.S.C. 657 f).
- ☒ (15) 52.219-28, Post Award Small Business Program Rerepresentation (JUNE 2007) (15 U.S.C. 632(a)(2)).
- ☒ (16) 52.222-3, Convict Labor (JUNE 2003) (E.O. 11755).
- ☒ (17) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (FEB 2008) (E.O. 13126).
- ☒ (18) 52.222-21, Prohibition of Segregated Facilities (FEB 1999).
- ☒ (19) 52.222-26, Equal Opportunity (MAR 2007) (E.O. 11246).
- ☒ (20) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (SEP 2006) (38 U.S.C. 4212).
- ☒ (21) 52.222-36, Affirmative Action for Workers with Disabilities (JUN 1998) (29 U.S.C. 793).

X   (22) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (SEP 2006) (38 U.S.C. 4212).

       (23) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (DEC 2004) (E.O. 13201).

  X   (24)(i) 52.222-50, Combating Trafficking in Persons (AUG 2007) (Applies to all contracts).

       (ii) Alternate I (AUG 2007) of 52.222-50.

       (25)(i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Items (MAY 2008) (42 U.S.C. 6962(c)(3)(A)(ii)).

       (ii) Alternate I (MAY 2008) of 52.223-9 (42 U.S.C. 6962(i)(2)(c)).

       (26) 52.223-15, Energy Efficiency in Energy-Consuming Products (DEC 2007) (42 U.S.C. 8259b)

       (27)(i) 52.223-16, IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (DEC 2007) (E.O. 13423).

       (ii) Alternate I (DEC 2007) of 52.223-16.

       (28) 52.225-1, Buy American Act--Supplies (JUNE 2003) (41 U.S.C. 10a-10d).

       (29)(i) 52.225-3, Buy American Act--Free Trade Agreements--Israeli Trade Act (AUG 2007) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, Pub. L 108-77, 108-78, 108-286, 109-53 and 109-169).

       (ii) Alternate I (JAN 2004) of 52.225-3.

       (iii) Alternate II (JAN 2004) of 52.225-3.

       (30) 52.225-5, Trade Agreements (Nov 2007) (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).

  X   (31) 52.225-13, Restrictions on Certain Foreign Purchases (JUN 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

       (32) 52.226-4, Notice of Disaster or Emergency Area Set-Aside (Nov 2007) (42 U.S.C. 5150).

       (33) 52.226-5, Restrictions on Subcontracting Outside Disaster or Emergency Area (Nov 2007) (42 U.S.C. 5150).

       (34) 52.232-29, Terms for Financing of Purchases of Commercial Items (FEB 2002) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

       (35) 52.232-30, Installment Payments for Commercial Items (OCT 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

  X   (36) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (OCT 2003) (31 U.S.C. 3332).

       (37) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (MAY 1999) (31 U.S.C. 3332).

\_\_\_ (38) 52.232-36, Payment by Third Party (MAY 1999) (31 U.S.C. 3332).

\_\_\_ (39) 52.239-1, Privacy or Security Safeguards (AUG 1996) (5 U.S.C. 552a).

\_\_\_ (40)(i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. Appx 1241(b) and 10 U.S.C. 2631).

\_\_\_ (ii) Alternate I (APR 2003) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items: (Contracting Officer check as appropriate.)

\_\_\_ (1) 52.222-41, Service Contract Act of 1965 (Nov 2007) (41 U.S.C. 351, et seq.).

\_\_\_ (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (MAY 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

\_\_\_ (3) 52.222-43, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Multiple Year and Option Contracts) (NOV 2006) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

\_\_\_ (4) 52.222-44, Fair Labor Standards Act and Service Contract Act--Price Adjustment (February 2002) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

\_\_\_ (5) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements (Nov 2007) (41 U.S.C. 351, et seq.).

\_\_\_ (6) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services--Requirements (Nov 2007) (41 U.S.C. 351, et seq.).

\_\_\_ (7) 52.237-11, Accepting and Dispensing of \$1 Coin (SEP 2008)(31 U.S.C. 5112(p)(1)).

(d) Comptroller General Examination of Record. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records--Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) (1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in paragraphs (i) through (vi) of this paragraph in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause--

(i) 52.219-8, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$550,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(ii) 52.222-26, Equal Opportunity (MAR 2007) (E.O. 11246).

(iii) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (SEP 2006) (38 U.S.C. 4212).

(iv) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(v) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (DEC 2004) (E.O. 13201).

(vi) 52.222-41, Service Contract Act of 1965 (Nov 2007) (41 U.S.C. 351, et seq.).

(vii) 52.222-50, Combating Trafficking in Persons (AUG 2007) (22 U.S.C. 7104(g)). Flow down required in accordance with paragraph (f) of FAR clause 52.222-50.

(viii) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements (Nov 2007) (41 U.S.C. 351, et seq.).

(ix) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services--Requirements (Nov 2007) (41 U.S.C. 351, et seq.).

(x) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (FEB 2006) (46 U.S.C. Appx 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the contractor May include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

(End of clause)

#### 52.216-19 ORDER LIMITATIONS. (OCT 1995)

(a) Minimum order. When the Government requires supplies or services covered by this contract in an amount of less than ~~(b) (4)~~ the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.

(b) Maximum order. The Contractor is not obligated to honor:

(1) Any order for a single item in excess of 10,000;

(2) Any order for a combination of items in excess of 10,000; or

(3) A series of orders from the same ordering office within 90 days that together call for quantities exceeding the limitation in subparagraph (1) or (2) above.

(c) If this is a requirements contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR)), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 30 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for and the reasons. Upon receiving this notice, the Government may acquire the supplies or services from another source.

(End of clause)

#### 52.216-22 INDEFINITE QUANTITY. (OCT 1995)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum". The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum".

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after five (5) years from the date of the Basic Contract.

(End of clause)

#### 52.222-54 EMPLOYMENT ELIG

#### **52.222-54 Employment Eligibility Verification (Jan 2009)**

(a) Definitions. As used in this clause—

Commercially available off-the-shelf (COTS) item--

(1) Means any item of supply that is--

(i) A commercial item (as defined in paragraph (1) of the definition at 2.101);

(ii) Sold in substantial quantities in the commercial marketplace; and

(iii) Offered to the Government, without modification, in the same form in which it is sold in the commercial marketplace; and

(2) Does not include bulk cargo, as defined in section 3 of the Shipping Act of 1984 ([46 U.S.C. App. 1702](#)), such as agricultural products and petroleum products. Per [46 CFR 525.1\(c\)\(2\)](#), "bulk cargo" means cargo that is loaded and carried in bulk onboard ship without mark or count, in a loose unpackaged form,



having homogenous characteristics. Bulk cargo loaded into intermodal equipment, except LASH or Seabee barges, is subject to mark and count and, therefore, ceases to be bulk cargo.

Employee assigned to the contract means an employee who was hired after November 6, 1986, who is directly performing work, in the United States, under a contract that is required to include the clause prescribed at 22.1803. An employee is not considered to be directly performing work under a contract if the employee--

- (1) Normally performs support work, such as indirect or overhead functions; and
- (2) Does not perform any substantial duties applicable to the contract.

Subcontract means any contract, as defined in 2.101, entered into by a subcontractor to furnish supplies or services for performance of a prime contract or a subcontract. It includes but is not limited to purchase orders, and changes and modifications to purchase orders.

Subcontractor means any supplier, distributor, vendor, or firm that furnishes supplies or services to or for a prime Contractor or another subcontractor.

United States, as defined in [8 U.S.C. 1101\(a\)\(38\)](#), means the 50 States, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands.

(b) Enrollment and verification requirements.

(1) If the Contractor is not enrolled as a Federal Contractor in **E-Verify** at time of contract award, the Contractor shall--

- (i) Enroll. Enroll as a Federal Contractor in the **E-Verify** program within 30 calendar days of contract award;
- (ii) Verify all new employees. Within 90 calendar days of enrollment in the **E-Verify** program, begin to use **E-Verify** to initiate verification of employment eligibility of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); and
- (iii) Verify employees assigned to the contract. For each employee assigned to the contract, initiate verification within 90 calendar days after date of enrollment or within 30 calendar days of the employee's assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section).

(2) If the Contractor is enrolled as a Federal Contractor in **E-Verify** at time of contract award, the Contractor shall use **E-Verify** to initiate verification of employment eligibility of--

- (i) All new employees.
  - (A) Enrolled 90 calendar days or more. The Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); or
  - (B) Enrolled less than 90 calendar days. Within 90 calendar days after enrollment as a Federal Contractor in **E-Verify**, the Contractor shall initiate verification of all new hires of the Contractor, who are working in the United States, whether or not assigned to the contract, within 3 business days after the date of hire (but see paragraph (b)(3) of this section); or
- (ii) Employees assigned to the contract. For each employee assigned to the contract, the Contractor shall initiate verification within 90 calendar days after date of contract award or within 30 days after assignment to the contract, whichever date is later (but see paragraph (b)(4) of this section).

(3) If the Contractor is an institution of higher education (as defined at [20 U.S.C. 1001\(a\)](#)); a State or local government or the government of a Federally recognized Indian tribe; or a surety performing under a

takeover agreement entered into with a Federal agency pursuant to a performance bond, the Contractor may choose to verify only employees assigned to the contract, whether existing employees or new hires. The Contractor shall follow the applicable verification requirements at (b)(1) or (b)(2), respectively, except that any requirement for verification of new employees applies only to new employees assigned to the contract.

(4) Option to verify employment eligibility of all employees. The Contractor may elect to verify all existing employees hired after November 6, 1986, rather than just those employees assigned to the contract. The Contractor shall initiate verification for each existing employee working in the United States who was hired after November 6, 1986, within 180 calendar days of--

- (i) Enrollment in the **E-Verify** program; or
- (ii) Notification to **E-Verify** Operations of the Contractor's decision to exercise this option, using the contact information provided in the **E-Verify** program Memorandum of Understanding (MOU).

(5) The Contractor shall comply, for the period of performance of this contract, with the requirements of the **E-Verify** program MOU.

(i) The Department of Homeland Security (DHS) or the Social Security Administration (SSA) may terminate the Contractor's MOU and deny access to the **E-Verify** system in accordance with the terms of the MOU. In such case, the Contractor will be referred to a suspension or debarment official.

(ii) During the period between termination of the MOU and a decision by the suspension or debarment official whether to suspend or debar, the Contractor is excused from its obligations under paragraph (b) of this clause. If the suspension or debarment official determines not to suspend or debar the Contractor, then the Contractor must reenroll in **E-Verify**.

(c) Web site. Information on registration for and use of the **E-Verify** program can be obtained via the Internet at the Department of Homeland Security Web site: <http://www.dhs.gov/E-Verify>.

(d) Individuals previously verified. The Contractor is not required by this clause to perform additional employment verification using **E-Verify** for any employee--

(1) Whose employment eligibility was previously verified by the Contractor through the **E-Verify** program;

(2) Who has been granted and holds an active U.S. Government security clearance for access to confidential, secret, or top secret information in accordance with the National Industrial Security Program Operating Manual; or

(3) Who has undergone a completed background investigation and been issued credentials pursuant to Homeland Security Presidential Directive (HSPD)-12, Policy for a Common Identification Standard for Federal Employees and Contractors.

(e) Subcontracts. The Contractor shall include the requirements of this clause, including this paragraph (e) (appropriately modified for identification of the parties), in each subcontract that--

(1) Is for--

- (i) Commercial or noncommercial services (except for commercial services that are part of the purchase of a COTS item (or an item that would be a COTS item, but for minor modifications), performed by the COTS provider, and are normally provided for that COTS item); or
- (ii) Construction;

(2) Has a value of more than \$3,000; and

(3) Includes work performed in the United States.



CLAUSES INCORPORATED BY FULL TEXT

52.223-11 OZONE-DEPLETING SUBSTANCES (MAY 2001)

(a) Definition. Ozone-depleting substance, as used in this clause, means any substance the Environmental Protection Agency designates in 40 CFR part 82 as--

(1) Class I, including, but not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or

(2) Class II, including, but not limited to, hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

"WARNING: Contains (or manufactured with, if applicable), a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere."-----

The Contractor shall insert the name of the substance(s).

(End of clause4)

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):

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

(End of clause)

252.204-7006 BILLING INSTRUCTIONS (OCT 2005)

When submitting a request for payment, the Contractor shall--

(a) Identify the contract line item(s) on the payment request that reasonably reflect contract work performance; and

(b) Separately identify a payment amount for each contract line item included in the payment request.

(End of clause)

**252.212-7001 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS APPLICABLE TO DEFENSE ACQUISITIONS OF COMMERCIAL ITEMS (SEP 2008) (DEVIATION)**

(a) In addition to the clauses listed in paragraph (b) of the Contract Terms and Conditions Required to Implement Statutes or Executive Orders--Commercial Items clause of this contract (FAR 52.212-5 (FEB 2008) (DEVIATION)), the Contractor shall include the terms of the following clause, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

252.225-7014	Preference for Domestic Specialty Metals, Alternate I (APR 2003) (10 U.S.C. 2533a).
252.237-7019	Training for Contractor Personnel Interacting with Detainees (SEP 2006) (Section 1092 of Pub. L. 108-375).
252.247-7023	Transportation of Supplies by Sea (MAY 2002) (10 U.S.C. 2631)
252.247-7024	Notification of Transportation of Supplies by Sea (MAR 2000) (10 U.S.C. 2631)

(End of clause)

**STATEMENT OF WORK**

**STATEMENT OF WORK**

for

Medium Range Thermal Bi-ocular (MRTB)

**1.0 SCOPE.**

This Statement of Work (SOW) defines the effort required for procurement and delivery of a Medium Range Thermal Bi-ocular (MRTB). This effort will be pursued as a commercial item purchase, pursuant to FAR 2.1, which provides the standard definition of a commercial item. Standard practices for "Acquisition of Commercial Items," as set forth in FAR 12.201, will be applied throughout the process. Additionally, the Contractor shall provide the requisite program management and logistics support to ensure that delivery schedules, performance requirements, and overall supportability of the MRTB system is accomplished as set forth in the contract.

This SOW includes the associated Program and Data Management, Government Furnished Property, Meeting and Reviews, System Engineering, Testing and Verification, Environment, Safety, and Occupational Health, Configuration Management, Item Unique Identification, Diminishing Manufacturing Sources and Material Shortages, Integrated Logistics Support, Maintenance Planning, Supply Support, Technical Publications, Support Equipment, Packaging, Handling, Storage and Transportation, Transportability, and Software.

The contractor is responsible for providing all/specific material, services and necessary support documentation needed to complete the tasks identified in this SOW.

**2.0 APPLICABLE DOCUMENTS**

The following documents specified form a part of this Statement of Work (SOW) to the extent specified herein. The most recent revision of the referenced document at the time of contract shall be used unless otherwise specified. In the event of conflict between the applicable documents and this SOW, the SOW shall take precedence. All second tier and below references cited in mandatory compliance documents shall be considered as guidance only. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

**2.1 Military Standards and Specifications - Mandatory Compliance.**

MIL-PRF-29612	Training Data Products
MIL-PRF-32216	DoD Handbook Evaluation of Commercial Off-the-Shelf Manuals
MIL-PRF-49506	Logistics Management Information
MIL-STD-129 P (3)	DoD Standard Practice Military Marking for Shipment and Storage
MIL-STD-130M	DoD Standard Practice Identification Marking of U.S. Military Property
MIL-STD-196E	DoD Standard Practice Joint Electronics Type Designation System
MIL-STD-810F (3)	DoD Test Method Standards for Environmental Engineering Considerations and Laboratory Tests
MIL-STD-882D	DoD Standard Practice System Safety
MIL-STD-2073-1D (1)	DoD Standard Practice Military Packaging
DoD Instruction 5000.64	Accountability and Management of DoD-Owned Equipment and Other Accountable Property
DoD 4140.1-R	DoD Supply Chain Material Management Regulation
DFARS	Clause 252.211-7003, Item Identification and Valuation
NAVSEAINST 9310.1B	Naval Lithium Battery Safety Program
TM S9310-AQ-SAF-010	Naval Lithium Battery Safety Program Responsibilities and Procedures
TM 10510-OD/IJ	General Purpose Test Maintenance and Digital Equipment
2.2	<u>Military Standards and Specifications - Guidance Only.</u>
MIL-STD-1425A	Safety Design Requirements for Military Lasers and Associated Support Equipment
2.3	<u>Federal Standard - Mandatory.</u>
	Not Applicable.
2.4	<u>Drawings.</u>
	Not Applicable.
2.5	<u>Handbooks - Guidance Only.</u>
MIL-HDBK-61A	Military Handbook Configuration Management Guidance
MIL-HDBK-217	Military Handbook Reliability Prediction of Electronic Equipment
MIL-HDBK-259	Life Cycle Cost in Navy Acquisition

MIL-HDBK-470	Military Handbook for Failure Reporting
MIL-HDBK-502	DoD Handbook Acquisition Logistics
MIL-HDBK-512	DoD Handbook Parts Management
MIL-HDBK-29612	Guidance for Acquisition of Training Data Products and Services
OPNAVINST 5100.27A/ MCO/5104.1B	Navy Laser Hazards Control Program
NAVSEAINST 9310.1B	Technical Manual for Navy Lithium Safety Program Responsibilities and Procedures

2.6 Other Government Documents. Unless otherwise stated, the following documents may be obtained from the Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094 or visit <http://dodssp.daps.mil>.

PS-MRTB-001	Performance Specification, requirements and desired attributes for the MRTB are contained as an attachment to the RFP.
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2.7 Non-Government Documents.

ASTM D3951-98	Standard Practice for Commercial Packaging
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(Copies of ASTM documents are available from [www.astm.org](http://www.astm.org) or American Society for Testing and Materials International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

EIA-649	National Consensus Standard for Configuration Management
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(Copies of EIA documents are available from [www.eia.org](http://www.eia.org) or Electronic Industries Alliance Corporate Engineering Department, 2500 Wilson Boulevard, Arlington, VA, 22201.)

ISO 9001-2000	Quality Management Practices
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(Copies of ISO documents are available from [www.iso.org](http://www.iso.org) or ISO Central Secretariat: International Organization for Standardization (ISO) 1, rue de Varembe, Case postale 56 CH-1211 Geneva 20, Switzerland.)

2.8 Forms.

DD Form 61	Application for Nomenclature Assignment
DD Form 1149	Requisition and Invoice Document
DD Form 1348	Issue/Release Receipt Document

3.0 **REQUIREMENTS**

The contractor shall perform all tasks required and delineated in this SOW to develop, fabricate, integrate, test, produce, manufacture, deliver and prepare associated documentation, provide logistic support, provide technical support, provide field service support, provide training, develop technical manuals and deliver the MRTB in the quantity specified in the contract. The contractor shall provide all materials, equipment, hard tooling, personnel, and

facilities necessary to manufacture, fabricate, integrate, produce, and deliver the types and quantities of deliverables specified by the contract and meet the requirements of the vendor's approved Performance Specification.

3.1 Technical Compliance with Performance Specification. The Contractor shall propose and deliver a system that is at a minimum compliant with Performance Specification (PS) PS-MRTB-001. The contractor shall submit a complete system performance specification for the MRTB product. Technical compliance will be based upon evidence (e.g. test or performance data) of the ability of the system to meet the attributes set forth in PS-MRTB-001. The approved system performance specification that the selected Contractor submits will serve as the functional baseline, once formally accepted and placed on contract by the Government.

3.2 Program and Data Management.

3.2.1 Program Management. The contractor shall establish and maintain program management practices throughout the period of performance. Program management practices shall provide visibility into the contractors' organization and techniques used in managing the program, specifically subcontractor and data management. Documentation shall be readily available to Government representative(s) during planned visits. This shall also include warranty and ICLS activity, as well as a warranty expiration matrix correlated to serial number, lot, and Government acceptance.

A001, Contractor's Progress, Status and Management Report

3.2.2 Subcontractor Management. The contractor is responsible for performance of requirements delineated in this SOW, and shall institute appropriate management actions relative to subcontractor performance. Requirements that are contractually specified shall apply to subcontractor performance; however, the contractor shall be accountable for compliance of subcontractors and is responsible for ensuring all deliverable products comply with the contract requirements.

3.2.3 Data Management System (DMS). 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, 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 access to data by the Government. The contractor shall ensure all data is 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 MRTB. Access to the DMS shall not require client software installation on Government computers.

3.2.3.1 Technical Proposal. The contractor's Technical Proposal, as negotiated and accepted by the Government, will be incorporated by reference into the resultant contract. Information contained in the contractor's proposal regarding organization, staffing, manning levels, and experience or education qualifications of personnel that are to be utilized in performance of this contract will also be incorporated into the resultant contract. Any changes in these arrangements are to be submitted to the contracting officer in advance for approval.

3.2.3.2 Schedule Planning. The contractor shall maintain an accurate schedule of program events and recommend program schedules, including review and evaluation techniques, which provide for the earliest delivery schedule while at the same time satisfying all requirements in a cost effective manner. The program schedule shall include all significant events, and a Program Planning Milestone Chart shall depict major tasks and events from start to completion of the contract. The contractor shall notify the Government in writing of any anticipated or projected work stoppages or delays that will impact schedules.

3.2.3.3 Assignment of Responsibility and Authority. The contractor shall identify the organizational elements responsible for the conduct of the activities delineated in this SOW. Responsibilities shall be assigned and clear lines of authority defined for determining and controlling the resources necessary to satisfy each element of this

SOW. The contractor's Program Manager, Systems Engineer, Configuration Manager, Integrated Logistics Support (ILS) Manager, Quality Assurance Manager, and Training Manager shall be designated as key personnel. The contractor shall notify the Government within ten days of any changes regarding authority, responsibility, or key personnel changes made by the contractor during the period of performance.

3.2.3.3.1 Program Manager. The contractor shall designate a Program Manager (PM) who shall possess sufficient corporate authority to manage, direct, execute and control all elements of the contract. The PM shall serve as the primary point of contact between the contractor and the Government, and be responsible for the coordination of all contractor activities related to the contract.

3.2.3.3.2 Systems Engineer. The contractor shall designate a Systems Engineer who shall possess sufficient authority to manage, direct, execute and control all engineering elements of the contract. Engineering elements shall include, but not be limited to design, development, fabrication, integration, test, production, manufacture, maintainability, reparability, and corrosion management.

3.2.3.3.3 Configuration Manager. The contractor shall designate a Configuration Manager (CM) who shall possess sufficient authority to manage, direct, execute and control all CM elements of the contract.

3.2.3.3.4 Integrated Logistics Support (ILS) Manager. The contractor shall designate an ILS Manager who shall possess sufficient authority to manage, direct, execute and control all ILS elements of the contract. ILS elements shall include, but not be limited to provisioning, repairs, maintenance, technical manual development, training development, Interim Contractor Logistics Support (ICLS) management, and warranty management.

3.2.3.3.5 Quality Assurance (QA) Manager. The contractor shall designate a QA Manager who shall possess sufficient authority to manage, direct, execute and control all quality elements of the contract.

3.2.3.3.6 Training Manager. The contractor shall designate a Training Manager who shall possess sufficient authority to manage, direct, and control all training elements of the contract in accordance with 3.17.1 of this SOW.

### 3.3 Government Furnished Property.

3.3.1 Government Furnished Equipment (GFE)/Government Furnished Property (GFP). GFE/GFP in the form of General Support Maintenance Automated Test Equipment (GMATE) currently within the Marine Corps active inventory will be made available to the contractor as required in support of organic maintenance capability development, testing and verification. Items will be provided to the contractor within 30 days of receipt of contractor's written request to the Contracting Officer for Program Manager, Optics & Non-Lethal Systems (PM ONS), Marine Corps Systems Command (MARCORSYSCOM). Written requests shall list required delivery date of GFE/GFP to meet proposed delivery schedules. The contractor shall provide for accountability, security and storage for the GFE/GFP provided. The contractor shall inspect and inventory all GFE/GFP received and provide this inventory to the Government within 10 working days of receipt of GFE/GFP. Additionally the contractor shall identify and report any GFE/GFP discrepancies/deficiencies to the Government within 72 hours of a discrepancy/deficiency determination and coordinate the application of any planned remedies with the Project Officer/Government Contracting Officer prior to their execution. Associated costs relative to materials labor and test (if applicable and only as authorized by the Government) for repair of the GFE/GFP to like new conditions shall be provided to the Government. Upon approval by the Government, the contractor shall conduct the necessary repair actions. The Government will forward an accountability agreement to the contractor for signature on an annual basis.

3.3.2 Government Furnished Information. If required, the Government will provide Government Furnished Information (GFI) in the form of NVThermIP software, General Support tools lists, and other GFI as necessary. The Government will furnish the identified GFI in the contract upon written request from the contractor to the Contracting Officer for Program Manager, Optics & Non-Lethal Systems (PM ONS), Marine Corps Systems Command (MARCORSYSCOM). The contractor shall notify the Government of any deficiencies in the GFI received.

## A002, Receipt of Government Material Report

3.4 Meetings, Formal Reviews, Conferences, Audits and Cost Estimation Products.

3.4.1 Contractor Responsibilities. The contractor shall plan, host, attend, coordinate, support and conduct the meetings, formal reviews, conferences, and audits. The reviews and/or audits 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. Agendas shall be provided as read ahead, in contractor format 10 days prior to the event to the Project Officer and Contracting Officer.

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. Conference Agenda and Conference Minutes shall be submitted in contractor format using Microsoft software within the Contractor's Progress, Status and Management Report in contractor format.

3.4.2 Post Award Conference. The contractor shall host a Post Award Conference (PAC) at the contractor's facility within 30 days after Contract Award. The purpose of the PAC is for the contractor to review and demonstrate to the Government the management procedures, review of technical and other specialty area status, and to establish schedule dates for near term critical meetings/actions. The contractor shall present management, key personnel, and program implementation processes. The contractor shall also present a current Line of Balance (LOB) depicting detailed MRTB system major assembly and sub-assembly indentures and the OEM sources of supply. Other Post Award Conference events shall include: Provisioning Guidance Conference (PGC), Level of Repair Analysis (LORA), Operator/Crew Technical Manual Review, Production Program Review (PPR), and Maintenance Training Guidance meeting.

3.4.3 In-Process Review. In Process Reviews (IPR) will be held on a quarterly basis or as needed basis, at a date and location mutually agreed upon. The Government reserves the right to cancel any review or to require any review to be scheduled during the period of performance. The contractor's progress, management, technical support services (if any), integrated logistics support, administrative status, assurance of compliance with contract requirements, program status, funding, problem identification and resolutions shall be agenda items. Actual versus expected performance of each area shall be addressed. The contractor shall prepare presentation materials providing an overview of all agenda items.

3.4.4 Production Readiness Review. The Production Readiness Review (PRR) shall be performed to evaluate the contractor's production status, identify existing or projected manufacturing problems, and areas of risk. The PRR shall be conducted concurrently with the PAC. The contractor shall demonstrate status in the following areas: (1) attaining the program's production goals, (2) resolving manufacturing problems (or that a plan for their resolution acceptable to the Government has been developed), and (3) mitigating all production risks. At the Government's discretion, follow-on production program reviews may be held quarterly at the contractor's facility. The review dates shall be contractor-proposed, Government-approved, and incorporated into the program schedule. The agenda of the PRR shall include, as applicable, at least the following considerations:

a. A Manufacturing Program Review to include the overall manufacturing system and detailed factors such as: manufacturing organization, responsibilities, facilities and equipment, manufacturing methods, and production flow.

b. A status review of all production efforts for schedule considerations.

c. A status review of manufacturing technology and other previously recommended actions to reduce



cost, manufacturing risk, and industrial base concerns.

d. The identity of open production concerns which require additional direction/effort to minimize risk to the production program.

e. A status review of production engineering efforts, tooling and test equipment demonstrations, and proofing of new materials, processes, methods, special tooling, test equipment.

f. A status of the hazard list from Environment, Safety and Occupational Health (ESOH) analysis.

g. The status of long lead items for production, if any.

h. Update on the planned Supportability Demonstration, Production Acceptance Test, and Testing of Initial Production Articles.

3.5 Systems Engineering. The contractor shall establish and maintain an effective systems engineering program throughout the testing and production processes

3.5.1 Reliability and Maintainability Program. (Option) The contractor shall maintain a comprehensive Reliability and Maintainability (R&M) program to ensure the MRTB meets the R&M standards set forth in the Contractor System Performance Specification. The design configuration shall be monitored throughout the entire period of performance to identify and assess any changes, which would impact reliability or maintainability. The contractor shall develop reliability analysis and predictions as required to ensure compliance with the performance specification. The program shall encompass all aspects of reliability with respect to selection of components, predictions, and testing. If it is determined that an item is a throwaway, an analysis shall be performed at the next higher indenture level. The contractor shall maintain and make available to the Government all R&M data on any vendor or subcontractor supplied item and shall inform the Government of any part or component, which will degrade system R&M requirements. The R&M program shall minimally include the following tasks:

3.5.1.1 Procedures and Controls. The contractor shall maintain procedures and controls, which ensure products, obtained from suppliers, vendors and subcontractors meet reliability requirements.

a. Establish, implement, and maintain documented procedures, which detect and/or preclude the use of substandard or counterfeit parts in the production process, and impose similar requirements on subcontractors.

b. Provide the Government with reasonable notice of any special R&M program review meetings scheduled with subcontractors so Government representatives may attend at their discretion.

3.5.1.2 Reliability Predictions. The contractor shall provide reliability predictions based on a defined configuration baseline. Reliability data shall be predicted and/or adjusted to apply a Ground Mobile environment 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 equipment reliability history data exists, this data shall take precedence over predicted data and be adjusted accordingly to thermal and environmental characteristics. The predictions shall be provided to the lowest indenture level and updated each time design or mission profile changes significantly impact the MRTB. In the event where the system architecture provides redundant functional/physical capabilities, the reliability report shall separately summarize adjustments to the predictions and identify the Mission Reliability. The contractor shall prepare and deliver a top-down indentured reliability report to include the identification of the Mean Time Between Failure (MTBF) for each maintenance-worthy item (i.e. component, major assembly and sub-assembly) in addition to identification of the total MRTB system MTBF using best commercial practices. Application of MIL-HDBK-217 as guidance is encouraged.

B001, Reliability Prediction and Documentation of Supporting Data

**3.5.2 Failure Reporting, Analysis, and Corrective Action System.** The contractor shall develop a closed loop failure reporting system, procedures for analysis of failures to determine the root cause, and documentation for recording corrective actions taken. The Failure Reporting, Analysis, and Corrective Action System (FRACAS) shall include uniform failure reporting, failure analysis reports and corrective actions. All hardware/software failures from system level down to the subassembly level shall be subject to these requirements throughout the testing period including production and integration testing, and during the post-production support period (to include the warranty, depot and ICLS period, as applicable). In the event where a failed item is returned subject to a Product Quality Deficiency Report (PQDR), traceability of the PQDR shall be integrated into the FRACAS. The contractor shall execute a single FRACAS database to encompass in-factory (testing) and in-field (post-production) failure reporting and shall be transferred to the Government upon conclusion of the period of performance. The contractor shall notify the Government of any failure impacting cost, schedule, producibility, supportability, and cost of ownership or interface/performance. All failures, critical and non-critical, shall be reported quarterly to the Government for review. All failures shall be categorized as in-field or in-factory failures. System operational hours (Elapsed Time Meter readings) shall be identified for each failure occurrence and included in the FRACAS data structure. The contractor shall assess the failure data for the identification of trends (5 or more failures of the same root cause) and identify those trends in the monthly report. Each FRACAS report shall, at a minimum, identify the root cause, and detail the remedial action taken including parts replaced. The Government reserves the right to conduct a Failure Review Board (FRB) throughout the contracted period of performance. The contractor is encouraged to use MIL-HDBK-470 as guidance.

#### B002, Failure Summary and Analysis Report and Failure Analysis and Corrective Action Report

**3.5.3 Quality Management System.** The contractor's quality management system shall ensure product conformation to contractual requirements. Use of ISO 9001-2000 processes are encouraged and may serve to meet Government Quality Management requirements. The contractor shall make available all quality management documentation for the Government to review upon request. The Contractor shall provide excess to their QMS system to facilitate review. Excess shall be inabled for authorized Government personnel and Contractors using Navy Marine Corps Intranet (NMCI).

**3.5.4 Pre-Planned Product Improvement (P<sup>3</sup>I) Program.** The Contractor shall assess the MRTB's viability to be enhanced through Pre-Planned Product Improvements (P<sup>3</sup>I). This assessment shall be presented to the Government at the Post Award Conference. The Contractor shall also demonstrate viability P<sup>3</sup>I during the Supportability Demonstration listed in 3.11.5 of this SOW. Subsequent review of P<sup>3</sup>I proposals will be conducted throughout the lifecycle of the contract as required. P<sup>3</sup>I for the MRTB program shall be for Commercial improvements to the performance of the MRTB system.

**3.6 Producibility.** The contractor shall demonstrate effective producibility principles during the MRTB Supportability Demonstration. The manufacturing planning specific to the MRTB program will be reviewed to ensure the current manufacturing activities meet the requirements of the Government. Production control, quality control, tooling and inspection will also be assessed during this event and make any data created available to the Government upon request.

#### 3.7 Environment, Safety, and Occupational Health.

**3.7.1 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 MRTB. The SAR shall include a signed statement that all identified hazards have been eliminated or their associated risks controlled to acceptable levels and that the MRTB is ready to test, field or operate in accordance with MIL-STD-882D and OPNAV 5100.27A/MCO 5104.1B. The SAR shall include the lithium battery risk assessment, recommendations, procedures and other corrective actions to reduce hazards to an acceptable level. In addition, the contractor shall make recommendations applicable to hazards at the interface of this MRTB with other systems. Laser Safety Certification Documentation shall be included in the SAR in accordance with 3.7.2 and 3.7.2.1 below.

#### B003, Safety Assessment Report

3.7.1.1 Lithium Battery Safety Qualification. The contractor shall develop a safety data package that shall document and demonstrate the stability of design and validity of any lithium battery selection, in accordance with NAVSEAINST 9310.1B and TM S9310-AQ-SAF-010 dated 19 Aug 2004. The contractor shall provide data from contractor testing of the complete system/item.

3.7.2 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 provide compliance documentation of safety design requirements for military lasers. MIL-STD-1425A may be used as a guide. 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.

3.7.2.1 Laser Support. The contractor shall provide documentation to support the Navy Laser Safety Review Board's review of all Class 3b and Class 4 lasers and all lasers used in combat, combat training, or classified in the interest of national security regardless of hazard classification (Military Exempt lasers). The Class 3b and Class 4 laser shall have a defeatable interlock in order to prevent its use in a non-eye safe mode, in environments in which its use is not approved. This defeatable interlock barrier shall be marked to ensure the use of the MRTB laser in non-eye safe mode is prevented. When a Class 1 laser has a defeatable interlock that, when defeated, allows access to Class 3B or Class 4 emission levels, an additional label is needed on or near the access panel that states the following:

DANGER  
Laser Radiation When Open Interlock Defeated,  
Avoid Eye or Skin Exposure to Direct or Scattered Radiation.

Operator/Crew level maintenance personnel shall not be authorized to remove the physical barrier. The contractor shall ensure that all Military Exempt laser systems have an appropriate disposal plan according to the guidelines set forth by the Food and Drug Administration (FDA), OPNAV 5100.27A/MCO 5104.1B.

3.8. Configuration Management Process. The contractor shall maintain a configuration management (CM) process for the control of all hardware and software configuration documentation, media and parts representing or comprising the MRTB. The principles contained in EIA-649 and MIL-HDBK-61A may be used for guidance. The contractor's CM process shall consist of configuration identification, configuration control, configuration status accounting, and configuration audits. The contractor may use ISO 9001-2000 as guidance for compliance with CM requirements. Consideration for interfacing with other acquisition requirements such as design review, assurance, and other program related disciplines shall be addressed. The contractor shall designate a CM representative to serve as a primary point of contact to the Government for all CM matters. The contractor's representative shall be responsible for any subcontractor's CM efforts. The contractor shall notify the Government of any changes at the contractor's facility, which affect the contractor's established CM process.

3.8.1 Configuration Identification. The contractor shall participate in a joint Government/contractor integrated team to designate configuration items (CIs) to be managed by the contractor. The contractor shall provide form, fit, function, and interface documentation necessary for configuration status accounting. The contractor shall establish management practices for CM activities.

3.8.1.1 Configuration Status Accounting. The contractor shall establish and maintain a Configuration Status Accounting (CSA) database, which represents the configuration of the MRTB. 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 MRTB activities, including program management, systems engineering, logistics support, and modification/maintenance actions. The contractor's CSA database shall be capable of providing CSA data in a digital format compatible with USMC's CSA automated information system,

Configuration Management Information System (CMIS). The contractor shall provide access to their CSA database to Government personnel to facilitate review IAW 3.2.3. Access must be enabled for authorized Government personnel and contractors using NMCI.

#### B004, Configuration Status Accounting Information

3.8.2 Parts Management Program. The contractor shall establish and maintain a Parts Management Program that will ensure the use of parts that meet contractual requirements, reduce proliferation of parts through standardization and enhance equipment reliability and supportability, and proactively manage obsolescence. Within 30 days after contract award, the contractor's plan for managing MRTB parts shall be provided to the Government. The plan shall identify MRTB parts and their current status as part of the contractors Line of Balance (LOB) and shall identify which parts currently possess Federal Stock Numbers (FSNs). The Government may perform audits, verifications, inspections or evaluations to ascertain program conformance and adequacy of the implementing procedures. The procedures, planning and all other documentation media and data that define the Parts Control Program and the parts selected for use shall be made available to the Government for their review and use. The contractor may utilize MIL-HDBK-512 as a guide for developing and maintaining the parts management program.

3.8.3 Baseline Management. The contractor shall be responsible for maintaining the currency and accuracy of all established baseline(s) to ensure form, fit, function and interface of the MRTB. The contractor shall establish definitive processes, which identify how the baseline(s) will be managed/maintained. These processes shall be defined in the contractor's configuration management plan and made available for Government review. The MRTB Performance Specification establishes the functional baseline once approved by the Government. Government approval shall be required prior to making changes that affect the functional baseline.

3.8.4 Configuration Control. The contractor shall implement configuration control methods and procedures, which maintain the integrity and traceability of an established baseline. Changes to established functional baselines shall only be made after Government approval of Engineering Change Proposals (ECP) and Request for Deviation (RFD). Sufficient supporting data to evaluate the proposed change, such as drawings, supplemental drawings, sketches, specifications, or manufacturer's data sheets, shall be submitted with ECP's and RFD's. Changes shall be identified to the affected assembly serial number, or if not part of an assembly, to the affected equipment serial number. The contractor's configuration control process shall be available for Government review. The contractor shall submit all configuration control documentation in a digital format specified by the Government.

3.8.4.1 Engineering Change Proposals. Engineering Change Proposals (ECP) shall be submitted by the contractor, and shall be limited to those, which are necessary or offer significant benefit to the Government. MIL-HDBK-61 provides guidance concerning the classification of ECP's. Class I ECP's shall be submitted when changes are required to: (a) Correct deficiencies; (b) Add or modify interface or interoperability requirements; (c) Make a significant and measurable effectiveness change in the operational capabilities or logistics supportability of the system; (d) Effect substantial life cycle costs/savings; and (e) Prevent slippage in an approved production schedule. Class II ECP's shall be submitted by the contractor to the Government for classification concurrence for those engineering changes, which impacts none of the factors listed above.

Class I ECP's shall contain the following information: (a) Date prepared; (b) Originator; (c) ECP Classification; (d) ECP Number; (e) Reason/need for change; (f) System designation (nomenclature, model, P/N); (g) Name of part (or lowest assembly) affected to include part numbers; (h) Baselines affected (to include drawings, specifications, CAGE, revision level, etc.); (i) Title of change; (j) Description of change; (k) Effect on interfaces (Interchangeability and Interoperability); (l) Total costs/savings w/ breakout; (m) Retrofit information; (n) Ozone Depleting Substances; (o) Impact on any engineering disciplines (such as quality, environmental, safety, health, reliability, maintainability, etc.); (p) Justification for change; (q) Priority of change; (r) Impacts to any logistics support elements (such as software, manuals, spares, tools, etc.) being utilized by Government personnel in support of the product; and (s) Alternatives evaluated or considered.

#### B005, Engineering Change Proposal (ECP)

3.8.4.2 Requests for Deviation. The contractor shall process Requests for Deviation (RFD) from current approved configuration documentation. Authorized deviations are a temporary departure from the requirements and do not constitute a change in an approved baseline. Submission of recurring deviations is discouraged and shall be minimized. Where it is determined that a change should be permanent, the contractor shall process an Engineering Change Proposal. MIL-HDBK-61 provides guidance concerning the classification of RFDs. As a minimum, the RFD shall contain the following information: (a) Date prepared; (b) Originator; (c) RFD Classification (critical, major or minor); (d) Designation for deviation (model/type, CAGE code, system designation, and deviation number); (e) Class of deviation; (f) Part Number affected; (g) Cost/Price data; (h) Effectivity; (i) Description of deviation; (j) Need for deviation; (k) Effect on delivery schedule; (l) Recommended corrective action; and (m) Alternatives evaluated.

#### B006, Request for Deviation (RFD)

3.8.4.3 Notification of Changes to Commercial Equipment/Software. The contractor shall submit notification to the Government when changes occur to commercial equipment or software, which is being procured or fabricated by the contractor off-the-shelf, and the Government does not control the developer's design.

#### B007, Technical Report - Study/Services

3.9 Item Unique Identification (IUID). The Contractor shall implement specific Item Unique Identification (IUID) markings, as defined in MIL-STD-130M dated 2 Dec 2005, DoD Instruction 5000.64, DoD 4140.1-R, and DFARS clause 252.211-7003. The IUID marking shall be incorporated into data plates and/or applicable components and shall present a Unique Item Identifier (UII) in construct #2 which at a minimum shall encompass: Issuing Agency Code (IAC), Enterprise ID, Original Part Number, Serial Number and Current Part Number under "Other" if the two part numbers (the original and current numbers) are different. It should be noted that the IAC represents the registration authority that issued the enterprise identifier (i.e., Dun and Bradstreet, UCC.EAN, etc). The IAC can be derived from the data qualifier for the enterprise identifier and may need to be marked on the item.

The two-dimensional IUID data matrix shall be machine-readable with scanning devices and shall be accompanied by the corresponding human readable markings when practical. All 2D data matrix shall be permanently affixed or engraved and have the ability to withstand and perform within the same environmental conditions as the MRTB. Whenever practical, the location of the marking on the item shall ensure its readability. Proposed size and location of IUID markings shall be presented to the Government for approval.

All end items, spare parts, and components that exceed \$5,000 when purchased separately shall also be marked with the IUID prior to delivery to the Government.

3.9.1 MRTB End Item Data Plate Information. The contractor shall use MIL-STD-130, figure 1 as a guide when developing the MRTB data plate. The Parent End Item 2D matrix shall contain human and machine-readable markings and shall be no less than 1 cm wide and no less than 40% contrast. The minimum data plate information for MRTB End Item is listed below:

- a. Nomenclature:
- b. National Stock Number (NSN):
- c. Design Activity: (MFR ID Cage Code)
- d. Serial Number:
- e. Government Ownership Designation: US Property
- f. Contract Number:
- g. 2-dimensional IUID data matrix
- h. Unique Item Identifier (UII)
- i. Warranty Expiration Date

3.9.2 Sub Assembly Data Plate Information. The contractor shall utilize Construct 2 to create the Unique Item

Identifier (UII). Any Sub-Assembly 2D matrix shall contain human and machine-readable markings and shall be no less than 1 cm wide and no less than 40% contrast. All applications must be permanently affixed, as well as, human and machine-readable when the necessary space is available. For Sub-Assembly items that do not currently utilize a data plate, the contractor shall refer to MIL-STD-130 to develop best business practices for a display of the data elements below. The IUID data plates shall display the following information:

- a. National Stock Number (NSN)
- b. Part Number
- c. Serial Number
- d. Manufacturer Cage Code
- e. 2-dimensional IUID data matrix
- f. Unique Item Identifier (UII)

3.10 Diminishing Manufacturing Sources and Material Shortages. The contractor shall identify all parts planned to be used, as well as those used in the MRTB at all indented levels as detailed within the contractor's progressively updated and maintained Line of Balance. This data may be obtained by the Government as required and on a progressive basis during the life of the contract. Additional sources such as the preferred parts list, line of balance, vendor surveys, inspections, etc. shall be used and also made available to the Government upon request. The information documented at the part level shall be updated as the design progresses or changes and be sufficient to enable forecasting and management of any associated Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.

B008, Source Data for Forecasting DMSMS

### **3.11 Testing, Verification, and Demonstration. All Governed by FAR 52.212-4 Contract Terms and Conditions—Commercial Items.**

3.11.1 Test Plan. The contractor shall prepare a Test Plan (TP) that encompasses all planned testing. The TP shall be the top-level working document that identifies all contractor testing. The following areas shall be emphasized in the TP:

- a. Test event
- b. Purpose of the test
- c. Date of test start and end
- d. Location of the test
- e. Need for Government test support, especially laboratories and facilities
- f. Overall schedule of individual tests
- g. Interoperability analysis/testing

Other revisions to the TP may be necessary between program benchmarks if the program undergoes significant changes. The Government will advise the contractor whenever significant program changes are necessary. The Government shall reserve the right to review and approve the TP and all applicable updates.

B009, Test Procedure

3.11.1.1 Government Test Facilities. If required by the contractor in the Test Plan, the contractor shall notify the Government of the need for Government test facilities in order to conduct testing. Government test facilities, such as laboratories shall be requested well in advance of their need.

3.11.2 Assessment of Initial Contract Production Units. The contractor shall develop and implement procedures to demonstrate the adequacy and suitability of the contractor's production processes and procedures for achieving the requirements in Contractor System Performance Specification by performing a comprehensive evaluation of the units

delivered in CLIN 0001. This assessment shall confirm the performance of the MRTB upon completion of the Production Acceptance Test (PAT) in 3.11.3. The Assessment of Initial Contract Production Units shall consist of tests, demonstrations, inspections, and/or analysis that supports and confirms all performance attributes of the System Performance Specification. These assessments shall be performed using equipment and/or facilities not used to produce the MRTB units or to conduct Acceptance Test Procedures (ATP). The main purpose of this event is to validate and verify ATP demonstrated in PAT, and serve as a benchmark for Government approval. Environmental compliance shall be in accordance with MIL-STD-810F and PS-MRTB-001. This assessment shall be conducted immediately prior to the Supportability Demonstration.

#### B010, Test/Inspection Report

3.11.2.1 Nonconformance of Initial Contract Production Units. In the event the first contract production units fail to meet requirements the units will be rejected by the Government. In that event, FIAR and FRACAS in accordance with 3.5.2 shall be submitted by the contractor to the Government. The Contractor shall submit plans for the corrective action or disposition to the Government for approval.

3.11.2.2 Production Refurbishment. At the Contractor's expense, the contractor shall refurbish Production Ready MRTBs used in the SD to new condition and deliver these units as part of the contract quantity, provided they meet production acceptance test requirements. This shall be accomplished within 90 days after Supportability Demonstration events.

3.11.3 Production Acceptance Test (PAT). The contractor shall develop and implement Production Acceptance Test (PAT) procedures that will verify compliance with Contractor System Performance Specification to demonstrate the adequacy and suitability of the contractor's production processes and procedures for achieving the performance inherent in the design. The contractor shall conduct testing, which will ensure that the manufacturing processes, equipment, and procedures are effective, and that the ATP adequately addresses the performance requirements. Performance requirements shall be verified during the Assessment of Initial Contract Production Units in accordance with 3.11.2 to either approve the ATP, or refine the ATP to meet Government approval thresholds. Once the ATP is approved by the Government, all MRTB units in CLIN 0001 shall undergo these tests to ensure quality and performance. The PAT shall be conducted prior to the Supportability Demonstration. Additional PAT shall be required if the manufacturing process or design changes significantly, or when a second source is brought on line.

3.11.4 Refurbishment and Retrofit of Units. At the Contractor's expense, the contractor shall refurbish and retrofit all previously delivered units to include all approved corrective actions and modifications. All refurbished and retrofitted units must undergo Production Acceptance Test (PAT) and are to be delivered as part of the required number of contract deliverables.

3.11.5 Supportability Demonstration. The contractor shall plan and conduct a Supportability Demonstration (SD) event to provide tangible demonstration of meeting the ILS contract requirements (i.e., capability to provide Marine Corps ILS support across the MRTB effort and additionally identify any needed improvements which may enhanced MRTB system supportability and in turn, reduced life-cycle cost). The Government intends to conduct SD within 90 days after contract award. The contractor shall perform all work necessary to develop, fabricate and deliver the System Support Package which will be evaluated during the SD. Marine Corps operator and maintenance personnel performing the SD will be trained and equipped as specified by the logistic concept being tested and will be representative of personnel described in the target audience description i.e. Marine Corps MRTB operators and Marine Corps maintainers. The SD will be performed to demonstrate the achievement of the following:

- a. Maintainability goals: Verify achievement of maintainability goals and to identify and correct supportability deficiencies.
- b. Preplanned Product Improvement (P<sup>3</sup>I): Identification of needed improvements to materiel design for improved supportability and reduced life-cycle cost.
- c. System Support Package (SSP): Provide a SSP which shall demonstrate the tangible viability of a

software based, integrated MRTB system-level fault isolation and calibration upload-capable support solution centered on: an MRTB data interface cable assembly, MRTB unique fault isolation/calibration software, a pool of by-system digital calibration data (with respect to the MRTB Focal Plane Array), resident Marine Corps inventory laptop controllers and thermal black body and controller as required.

d. System safety: Verify system safety label/markings and mitigation of operational and maintenance hazards, to confirm the safety of all procedures, tasks, and system labels.

e. Equipment publications: Review and verify the draft operator and maintainer equipment publications to include:

- (1) Fault diagnosis and calibration procedures: Confirm fault diagnosis procedures and FPA calibration procedures utilizing an MRTB system-level fault isolation and calibration upload-capable support solution.
- (2) Maintenance tasks and procedures: Confirm calibration procedures, maintenance tasks/procedures and repair/replacement procedures through the removal and replacement of component MRTB major assemblies and sub-assemblies.
- (3) Illustrations: Verify all illustrations match actual equipment configuration as well as the task sequencing for fault isolation, calibration, and MRTB disassembly/assembly procedures.

f. Task and skill requirements: Confirm and demonstrate task and skill requirements for operator and maintenance personnel by level of maintenance.

g. Maintenance time standards: Confirm maintenance time standards for maintenance functions through performance of the task by properly trained military maintenance personnel and verify maintenance manpower and personnel requirements.

h. Maintenance training products: Systems Approach to Training (SAT) format Maintenance training products qualification and demonstration to include MRTB maintenance lesson plans, training media (power point presentations etc.), training handouts, and delivery of instruction, and educational test products.

3.11.5.1 Supportability Demonstration Plan. The contractor shall develop and submit a SD Plan. The SD Plan shall contain the Government and contractors' cooperative plans and procedures for a combined demonstration of the logistic supportability of the system. The SD plan shall contain a statement of demonstration objectives and the qualitative and quantitative requirements to be demonstrated. The contents of the plan shall contain a description of the demonstration conditions. The following areas shall be addressed:

- a. A listing of tasks to be demonstrated. (See tasks associated with SD above)
- b. Demonstration conditions shall include the following:
  - (1) The principal operating modes, operating time and cycling conditions to be imposed.
  - (2) A description of the demonstration facilities and instrumentation requirements, including location.
  - (3) The mode of operation during the demonstration considering configuration and mission requirements.
  - (4) Demonstration constraints such as manpower (by number and skill level), test equipment and their relationship to the eventual use of the items.
- c. The types and quantities of equipment and materials to be used including Government Furnished Equipment (GFE).
- d. The maintenance concept.
- e. Schedule of events.



- e. Provisions for a pre-demonstration phase to prepare facilities, personnel and equipment for the formal demonstration.
- f. Expected results, including the following:
  - (1) The method to be used to report test levels.
  - (2) The data expected from each test along with the recording methodology and definition of ILS data elements to be collected.
  - (3) Analytical methods and calculation procedures to be used to analyze demonstration data.
  - (4) The criteria for classifying demonstration results as successes or failures. Definition of failure must relate to expected symptoms, which will be observed by operators and maintenance personnel.
- g. The plan of action to be used when demonstration failures occur.
- h. The participating agencies including:
  - (1) Organization.
  - (2) Degree of participation by each in terms of managerial, technical, maintenance and operating personnel.
  - (3) Assignment of specific responsibilities.
  - (4) Qualifications, quantity, sources, training and indoctrination requirements needed for the personnel participating in the SD.

**3.11.5.2 Supportability Demonstration Test Report.** The contractor shall develop and submit a SD test report documenting the results of the SD. The contractor shall provide a "hot-wash" or quick look report immediately following the SD to the program office in addition to the official final SD test report. Any failures that occur during the course of the event will be documented. The Contractor shall conduct an approved follow-on regression test/demonstration which will be observed by the Government for any failures in order to meet the requirement. The Government will approve the Test Report when all requirements have been met.

**3.12 Integrated Logistic Support.** The contractor shall plan and conduct the Integrated Logistics Support (ILS) program. The Government intends to implement an Interim Contractor Logistics Support (ICLS) program for a period not to exceed two years, during which time the contractor shall perform the maintenance and supportability tasks described in 3.12.4. During the ICLS phase, the Government and Contractor team will perform the tasks required to implement an organic maintenance capability that will support the MRTB at the Operator/Crew, Field, and Sustainment levels of maintenance. A Supportability Demonstration shall be conducted to validate and verify the maintenance program before transition between ICLS and organic maintenance. The Government intends to implement organic maintenance within a year of contract award.

The ILS effort shall be conducted to define the range and depth of the required support, and address all applicable and related elements of logistics. The system will be delivered concurrently with a government approved operator manual; a Marine Corps tailored ICLS package (Operator/Crew through Sustainment levels of maintenance), an applicable level of supply support to include spare and/or provisioned parts (relative to a Marine Corps Supportability Concept), warranty, and maintainer training products. (See sections 3.12.1, 3.12.2, and 3.17).

**3.12.1 ILS Management Team Integrated Product Team.** A joint Government/contractor ILS Management Team/Integrated Product Team (ILSMT IPT) shall be established to monitor the status of the ILS program implementation. The ILSMT IPT shall provide a means for coordinating logistic matters, schedules and SOW performance, ensuring adequacy and timeliness of Government inputs and action, and assisting the Government ILS manager in discharging their responsibilities. The Government will appoint the chairperson of the ILSMT IPT. Sub-teams or committees may be established as necessary to monitor such program elements as tests or demonstrations.

**3.12.2 ILSMT IPT Meetings.** On the average of once per quarter, the joint ILSMT IPT shall meet to review ILS program progress. The meetings shall be held at times and places mutually agreed to by the Government and

contractor. As a minimum, the agenda shall provide for status reporting, analysis of problem areas, evaluation of schedules and any proposed changes to the ILS program. Each open agenda item shall have a completion date and the action officer responsible shall provide the status at subsequent meetings. ILSMT IPT meetings shall normally be conducted in conjunction with IPR's.

3.12.3 Warranty. The Contractor shall warrant that the MRTB is free from any defects in material or workmanship and there shall be no degradation of system operation or performance due to manufacturing defects. The manufacture will repair or replace any MRTB found to require warranty service for two (2) years from initial MRTB unit acceptance. A storage warranty shall also be provided for five (5) years of storage. The Contractor shall be responsible for all costs relative to the shipping and handling of returns approved for warranty service, within the continental United States (CONUS), Alaska and Hawaii only. This includes; from the Marine Corps to the Contractor (CONUS) and from the Contractor to the Marine Corps (CONUS). Warranty repair turn around time shall not exceed 5 working days after receipt of a MRTB or failed materials to the contractors' repair facility. The time period will begin after a joint (contractor and Government representatives) determination of warranty status has occurred. The MRTB system warranty expiration period shall be managed by lot, serial number, and Government acceptance date of the system. The expiration date will be displayed on the system data plate in accordance with 3.9.1 of this SOW.

3.12.3.1 Warranty Procedures. Warranty issues shall be transacted between the authorized Marine Corps activities and the Contractor. If the defective MRTB is to be returned, the Marine Corps shall use the Equipment Repair Order (NAVMC 10925) to establish a Marine Corps equipment repair record for the system by serial number and defect(s), and pack and package the defective MRTB to prevent further damage and ship the system via the appropriate Marine Corps chain of custody to the Contractor. The Contractor shall have a means for the Marine Corps representatives to readily notify the contractor of warranty failures, 24 hours a day, 365 days a year (i.e., toll free number, voice mail, FAX number, email address, website). Upon notification by an authorized Marine Corps activity that a warranty failure has occurred, the Contractor will provide a Return Material Authorization (RMA) number and appropriate shipping instructions within 24 hours. A DD Form 1348 (Issue Release/Receipt Document) will accompany all shipments to the Contractor's facility including a return ship address. The Contractor will prepare a new DD 1149 (Requisition and Invoice/Shipping Document) for return shipments, to include system serialization data as part of the data requirements called for within DD 1149 block 4 (b).

Marine Corps units will provide the following information for return procedures:

Date:  
Branch of Service:  
UIC:  
Intermediate Maintenance Activity Address:  
Contact Name:  
Street and Number:  
City:  
State/Country:  
ZIP Code:  
Commercial Telephone Number:  
Commercial FAX Number:  
Email Address:  
Product Information Model:  
Serial Number:  
Reason for Return:

3.12.3.2. Warranty Exclusions. Contractor's warranty does not apply to any problems or failures that arise from improper installation or modification by other than Contractor, improper maintenance or storage or repair. Repair by authorized Marine Corps personnel will not void this warranty.

3.12.3.3. Warranty Returns. Government will return the Equipment to Contractor during the warranty period, transportation prepaid, for Contractor's examination and determination that such Equipment is defective and covered

by the terms of the Warranty. Upon receipt of the failed MRTB, a joint inspection shall be conducted with a Government (DCMA) representative to verify the warranty status of the item. However, if the equipment is deployed on a ship or if in a location that the Government cannot return the equipment during the Warranty period, and the Government has properly notified the Contractor that the equipment malfunctioned during the Warranty period, Contractor shall honor the Warranty as though the unit was returned during the Warranty period. The Warranty on any portion of the Equipment which has been repaired or replaced by Contractor under this Warranty shall be for the balance of the original Warranty period. This Warranty specifically covers the MRTB complete System. All warranty returns shall be followed up, in writing, in the form of a FRACAS Report that shall include a time-phased projection of when the threshold will be achieved or exceeded.

3.12.4 Interim Contractor Logistics Support (ICLS). This ICLS Plan will be for repair, returns, updates, modification, and condemnation of units not under warranty. The contractor shall receive, inspect, conduct test and failure analysis and/or isolate each MRTB to determine the specific work required to restore to an operational condition or recommend condemnation. The contractor shall repair the MRTB that does not exceed the one time repair parts price threshold (65% of the new MRTB price or equal to or greater than 110% of the Major repair price as defined by the contract). MRTB units that exceed these thresholds will be considered Beyond Economical Repair (BER). The contractor shall proceed with the necessary repair only if the MRTB is determined to be defective. Disassembly shall be limited to the minimum extent possible.

Should the estimated price of repair exceed the one time repair parts cost threshold, the Contractor shall notify the DCMA/PCO representative and the Marine Corps designated representative in writing within 48 hours for disposition instructions. The Contractor shall be responsible for the procurement actions for all spares and repair parts required to accomplish the work specified in the SOW during the performance period. All parts and material used during the repair process shall meet or exceed the original specifications and technical data requirements of the applicable contracts.

The contractor shall store all units, repair and spare parts in such a manner as to preclude any damage or loss. The contractor shall not be required to restore the MRTB to a like new cosmetic condition. Any damage to protective finishes shall be repaired to the extent necessary to provide adequate protection during field usage, corrosion prevention and structural integrity. The Contractor shall replace all damaged markings, identifications, and decals when the markings, identifications, or decals become unreadable. The Contractor shall ensure all repaired, upgraded, or modified systems meet or exceed the original performance. Scratches, delaminating or other optical flaws on the optics will be replaced only if it degrades system's performance or may deteriorate systems performance.

3.12.4.1 Major/Moderate/Minor/Assessment Criteria. The Contractor shall characterize all individual MRTB maintenance tasks, which comprise the sum total of all maintenance tasks required to execute MRTB non-warranty repairs under the following criteria; Assessment, Minor (Level 1), Moderate (Level 2), or Major (Level 3). Assessment or screening action costs shall be incurred for all MRTB systems submitted for ICLS repair as follows:

- Contractor Assessment or screening action cost will not exceed 1% of the new MRTB cost, for an MRTB as delivered to the Contractor by the Government for the purpose of ICLS action that is determined to be Beyond Economical Repair (BER) as per paragraph 3.12.4 of this statement of work.
- Contractor Assessment or screening action cost will not exceed 4% of the new MRTB cost for an MRTB as delivered to the Contractor by the Government for the purpose of ICLS action that is determined to require maintenance or exhibits no evidence of failure.

The criteria used to categorize/organize individual non-warranty repair tasks shall be as follows:

- Level 1 repair will not exceed 8% of the new MRTB price.
- Level 2 repair will not exceed 40% of the new MRTB price.

- Level 3 repair will not exceed 65% of the new MRTB price or be equal to or greater than 110% of the Level 3 repair price as defined by the contract.

ICLS action that is determined to exceed 65% of the new MRTB cost or be equal to or greater than 110% of the Level 3 repair price as defined by the contract will be considered BER and be condemned. Condemnation status will be conditional upon Government receipt of test and failure analysis and/or fault isolation data from the Contractor and the Contractor's receipt in writing of Government condemnation concurrence from the DCMA/PCO representative and/or the Marine Corps designated representative.

**3.12.4.2 Summary/Price Estimates.** The Contractor shall provide ICLS summary/price estimates during the life of the ICLS contract, at a minimum of every six months (or upon request) to the DCMA/PCO representative and/or the Marine Corps designated representative. Contractor summary/price estimates will be provided to the Government upon the Contractor's receipt of an MRTB submitted by the Government to the Contractor for ICLS repair and the completion of Contractor test and failure analysis and/or fault isolation determination actions. Summaries/price estimates for Levels 1, 2 and 3 will contain two tiers. Tier 1 of the Contractor summary/price estimate will detail the Contractor's assessment/screening action task cost and the applicable Level of repair price (Level 1, 2 or 3). Tier 2 of the Contractor summary/cost estimate will detail the Contractor's itemized material price required to complete the listed maintenance task (i.e. 1 cca, 1 cca mounting bracket, 1 seal) by part, sub-assembly and assembly.

**3.12.4.3 Receipt and Inspections.** Upon receipt at the contractor's facility, the Contractor and DCMA shall perform a joint incoming inspection. The incoming inspection shall check for the following:

1. MRTB identification visible damage or mishandling, completeness and accuracy of accompanying paperwork/documentation.
2. Deficiencies found, as a result of the incoming inspection shall be brought to the attention of the DCMA representative.

**3.12.4.4 Inspection and Acceptance.** Should a DCMA resident representative be unavailable for final inspection/acceptance, a day-to-day slip in the repair turnaround time will be allowed. The Contractor shall ensure that each repaired and serviceable MRTB is packaged IAW this statement of work.

**3.12.4.5 Time Constraints.** The Contractor shall acknowledge receipt; inspect, conduct warranty status determination; and determine major, moderate or minor repair for all CLS claims within 48 hours of receipt. The entire ICLS claim, from receipt to repair, shall be completed within five (5) working days.

Note: A working day constitutes a business day Monday through Friday. For a CLS claim submitted on Friday, the response will be due no later than 0730 the following Wednesday.

**3.12.4.6 ICLS Tracking.** The contractor shall track shipments to ensure direct and timely arrival to and from the field destination. The contractor shall immediately notify the appropriate Marine Corps designated representative and DCMA/PCO representative about any shipping problems or delivery delays that may be encountered.

**3.12.4.7 Transportation:** The contractor shall establish and maintain a transportation system for MRTB repairs which fully supports system and/or equipment returns, from the Marine Corps user location to the contractors' facility for returns from the contractor to a CONUS Marine Corps central point in support of warranty and/or non-warranty repair activities. The contractor shall use both Marine Corps and commercial transportation services as the situation dictates, or as directed by the Government to send equipment to CONUS locations.

**3.13 Maintenance Planning.** The contractor shall conduct maintenance planning to define optimal maintenance activities, which fully support the MRTB maintenance concept. Design influence for maintenance planning and ease of maintenance shall be affected. The maintenance concept for the MRTB is defined below.

**3.13.1 Operator/Crew Level Maintenance.** Operator/Crew (O/C) level maintenance will be conducted by MRTB users and will not require the use of any tools. This level of maintenance encompasses system cleaning and

maintenance actions and the replacement of technically undemanding external system parts such as lens caps, straps, eyecups etc. O/C level Preventative Maintenance Checks and Services (PMCS) and the required frequency of their performance will be delineated within the MRTB O/C level Technical Manual. This insures that equipment is fully mission capable and in most cases is the first source of identifying equipment problems. This may include limited diagnosis, fault isolation and repair/replacement authorized by applicable manuals. No special purpose tools or test equipment shall be required at the operator/crew maintenance level.

The intent of O/C level maintenance is sustaining equipment in a mission capable status and is both preventative and corrective in nature. O/C level maintenance includes expeditious assessment and maintenance conducted under battlefield conditions. O/C level maintenance normally entails inventory, cleaning, inspecting, preserving, lubricating, adjusting and testing as well as replacing simple technically undemanding external parts and components.

Operator/Crew level maintenance shall consist of the following:

a. Preventive maintenance includes visual inspection, testing, cleaning, tightening, and other minor adjustments, making external adjustments on equipment and performing operational checks using the Operator/Crew TM. Examples might include; lens cleaning, system function checks, battery inspection, MRTB system inspection etc. in the front lines of the battle space.

b. Corrective maintenance includes the performance of minor technically undemanding tasks such as external component replacement of lens caps, straps, eyecups, battery replacement and MRTB user recalibration procedures in order to expediently return the MRTB system to full operational capability with minimum downtime in the front lines of the battle space by the user.

**3.13.2 Field Level Maintenance.** Field level maintenance is focused on returning the MRTB system to operational status. Field level accomplishes this mission by fault isolating, replacing the failed components, and performing any required alignments/system adjustments on the MRTB as nearest to the battle space as practicable. Field level maintenance repairs are accomplished by MOS 2171 Electro-Optical Repair personnel who are positioned in direct support and general support capacities nearest to the battle space as practical.

Field level maintenance shall to return equipment to a mission capable status and is both preventative and corrective in nature. Field level maintenance actions include inspection, diagnosis (in-depth), modification, replacement, adjustment, and repair or evacuation/disposal of principal end items and/or their selected repairables and components/sub-components as applicable. Field level maintenance also includes the calibration and repair of test, measurement and diagnostic equipment (TMDE).

**3.13.3 Sustainment Level Maintenance.** Sustainment level maintenance consists of detailed repairs not accomplished at the field level of maintenance. This includes complete repair, major overhaul, or complete rebuild of the parts, assemblies, subassemblies, and end items, including secondary repairables, the manufacture of parts, piece part repair, modification, and testing that is beyond the capability of the Field level of maintenance. Normally this level of maintenance is accomplished within CONUS, farthest from the battle space.

**3.14 Supply Support and Level of Repair Analysis.** The Government will perform a Level of Repair Analysis at the Post Award Conference to review and determine the required supply support structure that ensures the potential availability and defines the by component applicability (within the context of supporting a limited organic support strategy) of Contractor provisioned parts, components, and supplies. The contractor shall provide and disassemble production grade equipment, as deemed necessary by the Government, during this conference to validate and verify all provisioning documentation. At the Post Award Conference the Contractor shall furnish provisioning data as a product of the Post Award Conference at mutually agreed upon intervals after the conference. The Government will clarify any provisioning issues during the evolution of the data cleansing process. The contractor shall identify provisioning and other pre-procurement screening data to be submitted for Government screening. Provisioning and other pre-procurement screening data are used to identify existing National Stock Numbers (NSNs) for items, validate currency of an NSN, and aid in maximum use of known assets.



## D001, Logistics Management Information (LMI) Summaries

3.14.1 Provisioning Technical Documentation. The contractor shall develop/document Provisioning Technical Documentation to include, but not be limited to; a Provisioning Parts List (PPL), Long Lead Time Items List (LLTIL), Common and Bulk Items List (CBIL), and any Design Change Notices (DCN). These lists shall contain the Data Products selection list. The Government at the Provisioning Guidance Conference (PGC) shall designate the format and medium of delivery. The frequency for submission of such lists shall also be designated at the PGC.

3.14.1.1 Provisioning Parts List. The Provisioning Parts List (PPL) shall contain the end item, component or assembly and all support items which can be disassembled, reassembled, or replaced at the Operator/Crew through Sustainment levels, and which, when combined, constitute the end item, component or assembly and shall include items such as parts, materials, connecting cabling, piping, and fittings required for the operation and maintenance of the end item, component, or assembly. The PPL is a tool used to determine the range of support items required to maintain the end item for an initial period of service. This includes all repairable Contractor Off-The-Shelf (COTS) items unless excluded by the provisioning requirements. It does not include a breakdown of Government furnished equipment. The PPL shall include items such as parts, materials, connecting cabling, piping, and fittings required for the operation and maintenance of the end item/equipment. The PPL shall contain all repair kits and repair parts required to maintain the end item, component, or assembly equipment unless excluded by the provisioning requirements or meeting the requirement for Common and Bulk Items List (CBIL) inclusion if CBIL is a contract requirement.

3.14.1.2 Defense Logistics Agency (DLA) Parts Positioning and Integration. Through the application of a Government approved MRTB parts list/catalog data, up to date provisioning data is required through the life of this contract. DLA may solicit parts support contract(s) on the basis of this list, considering other contract vehicles available on common items. The goal of the parts support contract(s) is to issue Direct Vendor Delivery (DVD) orders, wherever feasible. Price and other factors considered with inspection/acceptance and Free on Board (FOB) point at destination (unless otherwise designated on specific items) and Fast Pay payment procedures shall apply to each order less than \$100,000. The contractor shall agree to become a supplier of these parts via DOD Email by posting the parts list/catalog data on the DOD Email. Information and instructions for the DOD Email are available at:

<http://www.dscc.dla.mil/programs/email/index.html>.

3.14.2 Engineering Data for Provisioning. Engineering Data for Provisioning (EDFP) is technical data used to describe parts/equipment and consists of data such as specifications, standards, drawings, photographs, sketches and descriptions, and necessary assembly and general arrangement drawings, schematic drawings, schematic diagrams, wiring and cable diagrams necessary to indicate the physical characteristics, location, and/or function of the item. This information shall be provided in accordance with MIL-PRF-49506. At a minimum, EDFP must provide:

- a. Technical information of items for maintenance support considerations
- b. Item identification/descriptions necessary for:
  - (1) Cataloging actions and assignment of a National Stock Number
  - (2) Review for item entry control
  - (3) Standardization to include standardization/interchangeability
  - (4) Item management coding
  - (5) Identification/procurement of initial spares
  - (6) Preparation of allowance/issue lists

The contractor shall furnish EDFP in the following order of precedence:

- a. Government or industry recognized specifications or standards
- b. Engineering drawings
- c. Commercial catalogs or catalog descriptions
- d. Sketches or photographs with brief descriptions of dimensional, material, mechanical, electrical, or

other descriptive characteristics.

EDFP shall be submitted in hard copy. EDFP shall be marked in such a manner as to identify the proprietary rights (limited or unlimited). EDFP shall also be marked with the Provisioning Line Item Sequence Number (PLISN) in the upper right hand corner. EDFP shall NOT be provided when the item is:

- a. Identified as a Government specification or standard which completely describes the item including its dimensional, mechanical, and electrical characteristics
- b. Previously cataloged/assigned an active National Stock Number with type 1 item identification.

3.14.3 Request for Nomenclature. The contractor shall submit a completed Request for Nomenclature in accordance with MIL-STD-196E for the MRTB. The contractor shall submit a DD Form 61 to meet this requirement. This requirement is mandatory for use in type designation of communications and electronic materiel.

#### D002, Request for Nomenclature

3.14.4 Close out: Should the contract be terminated prior to the end of the performance period, the Marine Corps shall have the option to purchase all remaining MRTB spares and repair parts.

#### 3.15 Technical Publications.

3.15.1 Commercial Manuals. The Contractor shall deliver a complete Government accepted commercial operator manual concurrent with first MRTB system delivery. The Contractor shall also provide a complete Government accepted Field level commercial maintenance manual at the time stated within the contract. These commercial manuals shall contain installation, operation, troubleshooting and maintenance instructions. The commercial operator manuals shall include a complete Operator/Crew level repair parts list (including exploded views of all assemblies and subassemblies). The Field level manual shall include a complete Field through Sustainment levels repair parts list (including exploded views of all assemblies and subassemblies). The government will use MIL-PRF-32216 as a guide for review of submitted commercial manuals. The Government will provide changes to the manuals to format it to the users specified by the Government (i.e., the Marine Corps). The Government will provide the contractor with any changes resulting from TM reviews. The operator's manual shall be no larger than 4 ½ x 6 inches. The Field level maintenance manual shall be no larger than 8½ x 11 inches. The Contractor shall provide the final version of the operator's manual over packed by the contractor with each MRTB. The Contractor shall provide the final version of the Field level maintenance manual at the time stated within the contract. The Government reserves the right to oversee the production and distribution of the MRTB manual. A Technical manual start of work meeting shall be held concurrent with the PAC to ensure all requirements are reviewed and agreed upon.

#### F001, Commercial Off the Shelf (COTS) Manual and Supplemental Data

3.15.2 Copyright Release. The contractor shall identify copyrighted material, if any, and shall obtain the written approval of the copyright owner. The contractor shall furnish appropriate copyright release giving the Government permission to reproduce and use copyrighted information. When the contractor uses a manual, which covers a vendor's component(s) or a portion thereof, and the vendor's manual contains copyrighted material, the contractor shall be responsible for obtaining a copyright release from the vendor and providing the copyright release to the Government. Manuals delivered to the Government shall include the approved copyright release(s) statement.

3.15.3 Change Pages/Modification Instructions. The contractor shall provide change pages/modification instructions to the manual as a result of approved changes to the baseline system. The Government requires notification of all changes and revisions to the manuals for the duration of this contract. Notice of new models/equipment, when they are available, is also required for Government information. The contractor shall develop change pages/modification instructions in support of paragraph 3.15.4, below.

3.15.4 Publications Quality Assurance/Quality Control. Quality Assurance/Quality Control is the responsibility of the contractor. The contractor shall ensure that the equipment publications are fully edited, reviewed, and validated to ensure compliance with specifications and are technically accurate and useable by the target audience.

3.15.5 Scheduling IPRs. Technical publication IPRs if required shall be held at the contractor's or designated Government facility. The contractor shall submit an IPR schedule for review during initial Guidance Conference if applicable. IPRs will be held prior to Government acceptance. The contractor may request IPRs when assistance or clarification is desired. The Government may require and the contractor may request additional IPRs irrespective of the schedule.

3.15.6 Disposition of IPR Findings. Discrepancies and/or deficiencies found as the result of the IPR shall be corrected prior to the next IPR.

3.15.7 Validation. The Contractor shall have a process in place that provides for the validation of the adequacy and technical accuracy of the technical manual.

3.15.8 Verification. Verifications shall be held for the operator's and maintenance manuals to verify operation/maintenance procedures, conformance to contract, and usability. Appropriate contractor personnel shall attend and assist at the Government's request. Upon completion of the verification effort, the contractor shall incorporate all verification changes and review comments at no additional cost to the Government.

3.15.9 Final Acceptance and Delivery. Final acceptance will be made by the Government to certify that all comments resulting from the verification and supplementation (if any) have been incorporated into the applicable final operator and maintenance drafts. The Contractor shall deliver the manuals in MS Word to include graphics on CD-ROM. Digital photographs shall be provided for each operator and maintenance task on a separate CD-ROM. Camera ready copy shall be provided for each manual.

3.16 Support Equipment. The contractor shall provide a software based, integrated MRTB system-level fault isolation and calibration upload-capable support capability per the details of the MRTB contract. This solution shall be centered on: an MRTB data interface cable assembly, MRTB unique fault isolation/calibration software, a pool of by-system digital calibration data (with respect to the MRTB Focal Plane Array calibration), through the use of a Marine Corps inventory; laptop/controller, thermal black body system, mounting platform, associated optical bench fixtures and hardware. Items currently in the Marine Corps inventory shall satisfy the requirement for support equipment. Listings of support equipment resident in the Marine Corps inventory are available from the Government upon the contractor's written request.

3.16.1 General Purpose Support Equipment/General Purpose Automatic Test Equipment.

The contractor shall provide a complete listing applicable to a Marine Corps organic MRTB maintenance strategy, of General Purpose Support Equipment (GPSE) and/or General Purpose Automatic Test Equipment (GPATE) currently in the Marine Corps inventory which is part of the configured System Support Package, described within this SOW (paragraph 3.11.5, sub paragraph c.). Listings of GPSE/GPATE resident in the Marine Corps inventory are available via TM 10510-OD/1J, General Purpose Test Maintenance and Diagnostic Equipment (TMDE) Listing of January 2008, Publication Control Number 180 000140 00. Additional lists are available from the Government upon the contractor's written request.

G001, Maintenance, Test and Support Equipment List

3.16.2 Built-in test/built-in test equipment. The contractor shall provide a listing of Built-in test/built-in test equipment (BIT/BITE) within the system. A Calibration/Measurements Requirements Summary (CMRS) shall be provided for each BIT/BITE. BIT is a test approach using BITE or self-test hardware and software that are internally designed into the supported system, subsystem, or equipment to test all or a part of that system, subsystem, or equipment. BITE is any device that is part of a system, subsystem, or equipment and is used for the express purpose of testing the system, subsystem or equipment. BITE is an identifiable unit of the system, subsystem or equipment.



## G002, Calibration and Measurement Requirements Summary

3.17 Training Products and Services. The contractor shall provide a maintenance training program in accordance with MIL-PRF-29612. Additionally, the contractor will conduct (2) iterations of MRTB maintenance training. Initial training shall be conducted at a Marine Corps site, (1) west coast and (1) east coast, or the contractor's facilities. The Government reserves the right to determine which site provides the best value and economy of effort and inspect the contractor's training facilities. The specific location for these training events will be determined by the Government and coordinated with the Contractor as an outcome of the MRTB Supportability Demonstration event. This shall consist of (1) East Coast iteration and (1) West Coast iteration. Prior to course initiation, the contractor shall meet safety standards, which are in accordance with local, state, and federal regulations.

3.17.1 Training Development Management. The contractor shall appoint a Training Manager who shall be the single point of contact for training and courseware development matters. The Training Manager and other contractor personnel conducting training shall be able to read, write, speak and comprehend the English language, including technical language and terms associated with the operation, repair, installation, maintenance, assembly, and disassembly of the MRTB. The Training Manager shall have three or more years of training and managerial experience with formal military training, and shall have an understanding of all tasks to be taught under this contract, with expertise in one or more of the areas. Sixty days prior to the conduct of any training course, the contractor shall provide written certification of the proficiency and skill of the instructors to conduct the required training to the Government. Sufficient proficiency and skill is defined as either two years experience conducting formal military training in the specific area of instruction or an equivalent level of civilian teaching experience. The Government will consider waivers to proficiency and skill levels on a case-by-case basis. The Government will review and approve contractor proposed instructors thirty days prior to the start of training. The duties of this Training Manager shall include, but shall not be limited to, the coordination of training courseware analysis, design, and development. Additionally, the Training Manager shall be responsible for the coordination of all Government required maintenance training product reviews, leading up to the MRTB maintenance training certification event and the conduct of Government approved MRTB maintenance training presentations called for within CLIN 0005 in support of CLIN 0006.

3.17.1.1 Methods of Instruction. The preferred methods of instruction are lectures, demonstrations, practical exercises and application. No less than sixty percent of course presentation shall be practical exercise and hands-on training. Fault isolation shall be accomplished by having students identify faults to the specific Line Replaceable Unit (LRU) and with particular emphasis on high failure items. The trainee to instructor ratios shall be 10:1 for practical exercises and 25:1 for lectures.

3.17.1.2 Initial Training. The contractor shall develop training material (courseware) to cover operator and maintenance tasks for the MRTB. The contractor shall be responsible for initial training and all the courseware to support it. Training and courseware shall cover the maintenance, and repair of all components and ancillary equipment (if any) unique to the MRTB. Initial training shall be conducted at the contractor's facilities or a mutually agreed upon site. The Government reserves the right to inspect the contractor's training facilities.

3.17.1.3 Instructor and Key Personnel Training (I&KPT). The contractor shall conduct and be responsible for I&KPT utilizing the Government approved draft courseware. I&KPT shall consist of the course for maintainers. The contractor shall conduct two classes for a maximum of 30 students. These courses shall be targeted to the personnel who will maintain the MRTB system up to the Field (Intermediate) level of maintenance. The courses shall not be more than 40 hours in length (five, eight hour days) and will be conducted on the days Monday through Friday, beginning at 0800 on the first day. Government approval is required to increase the course length beyond 40 hours. Following completion of I&KPT, Government approved comments received from attendees shall be incorporated into the courseware to yield an improved product.

3.17.2 Maintenance Training Course Descriptive Data (CDD). The contractor shall provide CDD for the maintenance training program of the MRTB. The CDD shall identify the course administrative data applicable to the effective performance of all required maintenance tasks required to support MRTB maintenance activities.

3.17.2.1 **Instructional Level.** The contractor shall develop a maintainer course in sufficient depth to meet the following requirements:

a. **Maintenance Course Requirements.** This course shall be developed around the Government approved maintenance concept. This course shall be of sufficient depth to ensure that students are qualified to maintain the MRTB system to the appropriate level using the technical manuals, general-purpose test equipment, and all required diagnostic tools. This course shall include a minimum of 7 instructor-inserted faults or malfunctions. This course shall provide students with the knowledge and understanding of the system capabilities, limitations, interfacing, operations, maintenance tasks, and required maintenance related skill sets.

(1) At a minimum, the instruction shall include:

(a) Capabilities, functions, electro-optical/electronic theory of operation and functional operation of the MRTB system.

(b) Preventive and corrective maintenance procedures.

(c) External diagnostics, trouble shooting, component removal/installation procedures and other tests.

(d) Measured performance data.

(2) At a minimum, the instruction shall include and upon completion, enable the student to:

(a) Operate the system and subsystems.

(b) Execute diagnostic self-test and interpret readouts.

(c) Remove and install major components and perform pre-shop setup tests.

(d) Determine if the system/subsystem is malfunctioning or not.

(e) Isolate and locate malfunctions in the Line Replaceable Unit (LRU).

(f) Replace the defective assemblies and sub-assemblies.

(g) Troubleshoot and repair assemblies and sub-assemblies.

(h) Perform all required alignments and adjustments.

(i) Verify proper system/subsystem functions.

(j) Perform routine preventive maintenance functions.

#### H001, Training Program Structure Document

3.17.2.2 **Course Material.** The contractor shall develop and deliver maintenance training course material. The content of the course material shall focus on providing the maintainer with the knowledge and skills necessary to perform maintainer tasks. All course material shall be prepared per MIL-PRF-29612B and the Systems Approach to Training (SAT) Manual. The contractor shall provide, to each student attending maintenance Instructor and Key Personnel (I&KP) training events, a copy of all course material required to teach the course. The contractor shall provide all supplies, test equipment, common and special tools, and technical literature to each Government student while taking the course or as deemed most reasonable by the Government. Test equipment shall be identical to that used in the operational environment. The contractor shall prepare and deliver the following training documentation in accordance with MIL-PRF-29612B. For further guidance MIL-HDBK-29612 (parts 1 through 5) dated Aug 2001 may be used.

a. **Lesson Plan (LP).** The contractor shall provide a LP to the Government that shall contain data that provides specific definition and direction to the instructor on learning objectives, equipment, instructional media requirements, and the conduct of training.

b. **Trainee Guide (TG).** The contractor shall provide a TG that shall contain data, which enhances the trainee's mastery of the knowledge, skills, and attitudes needed for a given subject. These materials may be in the form of information, diagram, job, assignment, problem, and outline sheets.

c. **Instructional Visual Aids.** The contractor shall provide visual aids, such as slides and transparencies, to be used by the instructor in the conduct of classes. They shall enhance the learning process and be in accordance with Government approved production standards.

#### H003, Training Conduct Support Document

3.17.2.3 **Instructional Performance Requirements Document (IPRD).** The contractor shall develop an instructional performance requirements document for Maintenance Training. The contractor shall prepare an IPRD providing the individual job task data and listing of knowledge, skills, and attitudes associated with the performance of tasks selected for training. The IPRD shall include Terminal and Enabling Learning Objectives (TLO/ELO) from which training materials will be developed.

#### H002, Instruction Performance Requirements Document

##### 3.18 PACKAGING, HANDLING, STORAGE AND TRANSPORTATION.

The contractor shall be responsible for preservation and packaging of the deliverables under the terms of this statement of work. Packaging shall be in accordance with MIL-STD-2073-1D (1).

3.18.1 **Preservation and Packaging.** Shipments for immediate use shall be preserved and packaged by the Contractor in accordance with the best commercial practices of ASTM D 3951-98. Items scheduled for OCONUS overseas shipment shall be preserved and packaged by the Contractor in accordance with ASTM D 3951-98, paragraph 6.1., Export requirements. OCONUS items scheduled for long-term storage (longer than 9 months) shall be in accordance with Level "A" requirements of MIL-STD-2073-1D and items scheduled for short-term storage shall be in accordance with Level "B" requirement. Marking of all items for shipment and storage shall be in accordance with MIL-STD-129.

3.18.2 **Development of Marking Requirements.** Marking shall be accomplished by the Contractor in accordance with MIL-STD-129P(3).

3.18.3 **Engineering Changes.** In the event an engineering change affects packaging design requirements for previously approved data, the contractor shall update the affected packaging data and submit it to the Government for approval.

#### I001, Preservation and Packing Data

##### 3.18.4 UID BAR CODE IDENTIFICATION REPORT.

3.18.4.1 **Item Unique Identification (IUID).** The Contractor shall implement specific Item Unique Identification (IUID) markings, as defined in MIL-STD-130M dated 2 Dec 2005, DoD Instruction 5000.64, DoD 4140.1-R, and DFARS clause 252.211-7003. The IUID marking shall be incorporated into existing data plates. The two-dimensional IUID data matrix shall be machine-readable with common optical scanning devices and be accompanied by the corresponding human readable markings when practical.

Information contained in the machine-readable code shall be: Manufacturer CAGE Code, Manufacturer part number, and serial number. This provides a valuable tool for asset tracking from acquisition through manufacture as well as item life cycle management.

The Contractor shall supply documentation in formats (written and electronic) that are readily usable by the Government with each shipment of equipment and/or repairables that the government purchases. The Contractor shall maintain all of this information in their Data Management System and the documentation shall be readily available to Government representative(s):

-NSN

-MFR P/N

-S/N

### 3.18.5 PREPARATION FOR SHIPMENT

3.18.5.1 Packaging and marking of all deliverables shall be in accordance with the best commercial practice necessary to ensure the safe and timely delivery at destination. Individual CLINs may provide specific instruction.

3.18.5.2 All reports shall prominently show on the cover of the report:

- a. Name and business address of the Contractor;
- b. Contract Number;
- c. Delivery Order Number;
- d. Date of Deliverable; and,

Receiving Party (i.e. requesting customer and Project Officer)

## SECTION F

### Delivery Schedules

1. The delivery date for CLIN 0001 (MRTB Phantom IR+) under delivery order 0001 shall be delivered at the following rate:

Days*	90	150	180	210	240	270	300	330	360	390	420	450	480	Total
Qty	25	150	250	300	350	450	450	450	475	475	475	475	475	4800**

2. The delivery date for all orders under CLIN 0007 (Spare Parts) shall be set at no less than 60 days of the issuance of a delivery order and at quantities of 100 per item within each delivery.

\*Represents days after award of delivery order 0001.

\*\* Represents an estimated quantity for delivery order 0001.

## SECTION- H

### SECTION-H SPECIAL CONTRACT REQUIREMENTS

#### 1. TESTING, VERIFICATION AND DEMONSTRATION

Following Post Award of the initial Delivery Order to CLIN 0001, the contractor shall plan and conduct a Production Acceptance Test, assessment of Initial Contract Production Units and a Supportability Demonstration (SD) event. SOW reference paragraph section 3.11 The Contractor shall provide 25 MRTB units, from the initial Delivery Order, to be used in support of the above three (3) events.

#### 2. EMPLOYMENT OF US GOVERNMENT PERSONNEL RESTRICTED

In performing this contract, the Contractor shall not use as a consultant or employ (on either a full or part time basis) any active duty U.S. Government personnel (civilian or military) without the prior written approval of the Contracting Officer. Such approval may be given only in circumstances where it is clear that no laws and no DOD or U.S. Government instructions, regulations, or policies might possibly be contravened and no appearance of conflict of interest will result.

### 3. ENGINEERING CHANGES

(a) After contract award, the Government may solicit, and the Contractor is encouraged to propose independently, engineering changes to the equipment, software specifications, or other requirements of this contract. These changes may be proposed to save money, to improve performance, to incorporate new technology, to save energy, or to satisfy increased data processing requirements. If the proposed changes are acceptable to both parties, the Contractor shall submit a priced change proposal to the Government for evaluation. Those proposed engineering changes (ECP) that are acceptable to the Government will be processed as modifications to the contract.

(b) This ENGINEERING CHANGES clause applies only to those proposed changes identified by the Contractor, as a proposal submitted pursuant to the provisions of this clause. At a minimum, the following information shall be submitted by the Contractor with each proposal:

(1) A description of the difference between the existing contract requirement and the proposed change, and the comparative advantages and disadvantages of each;

(2) Itemized requirements of the contract which must be changed if the proposal is adopted, and the proposed revision to the contract for each such change;

(3) An estimate of the changes in performance and cost, if any, that will result from adoption of the proposal;

(4) An evaluation of the effects the proposed change would have on collateral costs to the Government, such as Government-furnished property costs, costs of related items, and costs of maintenance and operation, and;

(5) A statement of the time by which the change order adopting the proposal must be issued so as to obtain the maximum benefits of the change(s) during the remainder of this contract. Also, any effect on the contract completion time or delivery schedule shall be identified.

(c) Engineering change proposals submitted to the Contracting Officer shall be processed expeditiously. The Government shall not be liable for proposal preparation costs or any delay in acting upon any proposal submitted pursuant to this clause. The Contractor has the right to withdraw, in whole or in part, any engineering change proposal not accepted by the Government within the period specified in the engineering change proposal. The decision of the Contracting Officer as to the acceptance of any proposal under this contract shall be final.

(d) The Contracting Officer may accept any engineering change proposal submitted pursuant to this clause by giving the Contractor written notice thereof. This written notice may be given by issuance of a modification to this contract. Unless and until a modification is executed to incorporate an engineering change proposal under this contract, the Contractor shall remain obligated to perform in accordance with the terms of the existing contract.

(e) If an engineering change proposal submitted pursuant to this clause is accepted and applied to this contract, an equitable adjustment in the contract price and in any other affected provisions of this contract shall be made in accordance with this clause and other applicable clauses of this contract. When the cost of performance of this contract is increased or decreased as a result of the change, the equitable adjustment increasing or decreasing the contract price shall be in accordance with the "CHANGES" clause rather than under this clause, but the resulting contract modification shall state that it is made pursuant to this clause.

(f) The Contractor is requested to identify specifically any information contained in the engineering change proposal which the Contractor considers confidential and/or proprietary and which the Contractor prefers not be disclosed to the public. The identification of information as confidential and/or proprietary is for informational purposes only and shall not be binding on the Government to prevent disclosure of such information. Offerors are advised that such information may be subject to release upon request pursuant to the Freedom of Information Act (5 U.S.C. 552).

### 4. ENGINEERING CHANGE PROPOSALS

(a) Configuration Management. Configuration Management shall be managed by the contractor in accordance with 3.8 in the Statement of Work.

(b) Unauthorized Changes

(1) No order, statement, or conduct of Government personnel who might visit the contractor's facility or in any other manner communicate with contractor personnel during the performance of this contract shall constitute a change under the "CHANGES" clause of this contract.

(2) No understanding or agreement, contract modification, change order, or other matter deviating from or constituting an alteration or change of the terms of the contract shall be effective or binding upon the Government unless formalized by contractual documents executed by the Contracting Officer.

(3) The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract and, notwithstanding provisions contained elsewhere in the contract, the said authority remains solely with the Contracting Officer. In the event that the contractor effects any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority at the contractor's expense, and no adjustment shall be made in the contract price or other contract terms and conditions as consideration for the aforementioned unauthorized change. Further, should the unauthorized change be to the Government's detriment, the contractor may be held financially responsible for its correction.

## 5. ORGANIZATIONAL CONFLICT OF INTEREST

(a) The Contractor understands and agrees that the Department of Defense will not consider it, its successors, or assignees (hereinafter referred to as the Contractor, as a source of supply for any system or major component thereof, or training related thereto, for which the Contractor provides technical support and management assistance under the contract. The Contractor further understands and agrees that it will not be allowed to be a subcontractor or consultant to a supplier of a system or any major components thereof, or training related thereto, for which the Contractor provides technical support and management assistance under this contract.

(b) If, under this contract, the Contractor assists the Department of Defense in the preparation of a Statement of Work, or provides material leading directly, predictably, and without delay to a Statement of Work, to be used in the competitive procurement of a system or services, the Contractor understands and agrees that for the period from effective date of contract through 1 year after contract completion it shall not be allowed to supply the services or the system or major components thereof, unless it is the sole source. The content of a Statement of Work shall not be considered predictable if more than one prime Contractor is involved in the preparation of material leading to it.

(c) The Contractor hereby understands and agrees that if work to be performed under this contract requires access to proprietary data of other companies, the Contractor must agree with such other companies to protect such data from unauthorized use or disclosure so long as it remains proprietary. Evidence of such agreement must be made available to the PCO upon request. Further, the Contractor agrees that it will not utilize the data obtained from such other companies in performing for the Department of Defense additional studies in the same field, which are obtained competitively.

(d) Under the provisions of this contract, the Contractor shall conduct a review of actual or potential Organization Conflict of Interest (OC of I) as defined in and within the meaning of FAR Subpart 9.5. If in the opinion of the Contractor the performance of a task directed under this contract will involve an actual or potential OC of I, the Contractor shall notify the Contracting Officer and provide justification in support of its opinion. The Contracting Officer will thereupon determine whether in fact the task does involve an OC of I. If the Contracting Officer determined that an OC of I is involved, the Contractor shall not perform said task unless the parties agree that the restrictions imposed by FAR Subpart 9.5 apply.

(e) Any subcontractor, which performs any work relative to this contract, shall be subject to paragraphs A through D above.

(f) The Contractor agrees to notify any subcontractor, which, pursuant to paragraph E above, is subject to paragraphs A through D above that it is so subject.

(g) The Government may waive the prohibitions imposed by this clause.

## 6. MINIMUM & MAXIMUM PURCHASE ID/IQ CONTRACT

This is an Indefinite Delivery Indefinite Quantity (IDIQ) contract utilizing Firm Fixed Price Delivery Orders. The period of performance under this contract shall be five (5) years from the date of contract award consisting of the initial ordering period from date of contract award through 30 September 2009 and the remaining four (4) year periods will be in effect on a fiscal year basis from 01 October -30 September with the exception of the last ordering period which will extend past 30 September in order to complete the five (5) year period. Performance shall be made only as authorized by delivery orders issued in accordance with the ordering clause of this contract. **The Government's obligated minimum purchase for CLIN 0001 is 25 MRTB (Phantom IR+) systems to be procured during the first year of the contract. The maximum purchase for CLIN 0001 is 10,000 MRTB (Phantom IR+) systems for the life of the contract. All other CLINS have a Government-obligated minimum of zero and a maximum of 10,000. The cumulative total of all delivery orders placed under this contract shall not to exceed \$180,000,000.00 for the life of the contract.**

## 7. SUPPLIES/PRICE COSTS

The contractor shall furnish all personnel, facilities, support and management necessary to provide the items specified herein.

## 8. LASER POINTER (CLASS 3B LASER)

It is understood between the Marine Corps and ELCAN that should a LSRB certification not be initially granted, ELCAN will incorporate Marine Corps detailed design requirements for all laser safety labels and all system safety requirements changes required to obtain LSRB certification to the PhantomIR+. ELCAN's ability in meeting and obtaining LSRB certification will not impose any additional pricing to this awarded contract.

## SECTION - G

### **Section - G Contract Administration Data**

## **WAWF REQUESTS FOR PAYMENT**

In compliance with DFARS 252.232-7003, "Electronic Submission of Payment Requests (January 2007)", the United States Marine Corps (USMC) utilizes WAWF-RA to electronically process vendor requests for payment. The contractor is required to utilize this system when processing invoices and receiving reports under this contract - unless the provision at DFARS 252.232-7003(c) applies. The contractor shall (i) register to use WAWF-RA at <<https://wawf.eb.mil/>> and (ii) ensure an Electronic Business Point of Contact is designated in the Central Contractor Registration at <<http://www.ccr.gov>>, within ten (10) days after award of the contract or modification incorporating WAWF-RA into the contract.

The contractor is directed to use the "2 -in-1" format when processing invoices for services and a "Combo" when processing invoices for supplies. For all requirements, the contractor shall use the Marine Corps Systems Command DODAAC M67854 and applicable extension PG13 (i.e., M67854PG13) as the DODAAC for all shipping addresses.

## **WAWF SUPPORT / ASSISTANCE**

The Marine Corps Systems Command WAWF Support points of contact is email:  
QUAN\_MCSC\_DFM [MAO@usmc.mil](mailto:MAO@usmc.mil)



Or USMC Help Desk at CACI/UNITECH, 703-221-6911 OR 703-432-4442

The WAWF-Receive & Acceptance (RA) for this order is Joe Bernardoni and can be reached at (229) 639-5086 or e-mail [joseph.bernardoni@usmc.mil](mailto:joseph.bernardoni@usmc.mil)

Data entry information for WAWF:

Payment Office DoDAAC: HQ0339  
Issue By DoDAAC: M67854  
Admin Office DoDAAC: S4402A  
Inspect by DoDAAC: S4402A  
Ship to DoDAAC: M67854 Extension PG13  
Contract Number: M6785409D1017

Direct an additional email notification of invoices to:

Contract Specialist: [Eddie.Tavares@usmc.mil](mailto:Eddie.Tavares@usmc.mil)

Project Officer: Ben Kaler

Receiving Acceptance Officer: [joseph.bernardoni@usmc.mil](mailto:joseph.bernardoni@usmc.mil)

GOVERNMENT CONTRACT ADMINISTRATION POINT-OF-CONTACT AND RESPONSIBILITIES

Procuring Contracting Officer

Name: John J. Wahl  
Address: Commanding General  
Attn: PG-13, Infantry Systems  
Marine Corps Systems Command  
2200 Lester Street  
Quantico, Virginia 22134  
Phone: (703) 432-3568, FAX: (703) 432-3526

Email: [john.wahl@usmc.mil](mailto:john.wahl@usmc.mil)

The Contracting Officer is the only person authorized to approve changes in any of the requirements of this contract and notwithstanding provisions contained elsewhere in the contract, the said authority remains solely with the Contracting Officer. In the event that the contractor effects any change at the direction of any person other than the Contracting Officer, the change will be considered to have been made without authority at the contractor's expense, and no adjustment shall be made in the contract price or other contract terms and conditions as consideration for the aforementioned unauthorized change. Further, should the unauthorized change be to the Government's detriment, the contract may be held financially responsible for its correction. Procurement Contracting Officer's responsibilities are outlined in FAR 1.602-2.

Contract Specialist:

Name: Eddie Tavares  
Address: Commanding General  
Attn: PG-13, Infantry Systems  
Marine Corps Systems Command  
2200 Lester Street  
Quantico, Virginia 22134  
Phone: (703) 432-3622, FAX: (703) 432-3526  
Email: [Eddie.Tavares@usmc.mil](mailto:Eddie.Tavares@usmc.mil)



The Contract Specialist is the representative of the Contracting Officer for all contractual matters.

**Administrative Contracting Officer (ACO)**

- (a)     Name:            DCMA TBD  
         Address:        DCMA Texas  
                         2501 W. University Drive, MS 8010  
                         McKinney, TX 75071

The Administrative Contracting Officer (ACO) of the cognizant Defense Contract Management Agency (DCMA) is designated as the authorized representative of the Contracting Officer for purposes of administering this contract in accordance with FAR 42.3.

**Project Officer**

- (a)     Name:            Ben Kaler  
         Address:        Commanding General  
                         Attn: PG-13, Infantry Systems  
                         Marine Corps Systems Command  
                         2200 Lester Street  
                         Quantico, Virginia 22134  
                         Phone: TBD, FAX: (703) 432-3526  
  
                         Email: [Benjamin.Kaler@usmc.mil](mailto:Benjamin.Kaler@usmc.mil)

- (b) The Project Officer (P.O.) is the appointed representative for technical matters. The P.O. is not a contracting officer and does not have the authority to direct the accomplishment of effort which is beyond the scope of the contract or to otherwise change any contract requirements.

**Paying Office**

- (a)     Name:            DFAS Columbus  
         Address:        West Entitlement Operations  
                         Po Box 182238  
                         Columbus, OH 43218-2381

- (b)     The Paying Office makes all payments under the contract.

**ORDERING (INDEFINITE DELIVERY TYPE CONTRACTS)**

(a) Ordering: All Marine Corps Systems Command Warranted Contracting Officers are authorized ordering officers. Supplies or services to be furnished under this contract shall be furnished at such times as ordered by the issuance of Orders on DD Form 1155 by the Contracting Officer. All orders are subject to the terms and conditions of this contract. This contract shall control in the event of conflict with any order.

- (b) Ordering Procedures:

(1) Orders issued shall include, but not be limited to the following information (when applicable):

- (i) Date of order.
- (ii) Contract and order number.
- (iii) Type of Order.
- (iv) Appropriation and accounting data.

- (v) Description of the services to be performed.
- (vi) Description of end item(s) to be delivered.
- (vii) DD Form 254 (Contract Security Classification Specification)
- (viii) DD Form 1423 (Contract Data Requirements List), if data to be delivered under the order is not listed on the DD Form 1423 included in this contract.
- (ix) The individual responsible for inspection/acceptance.
- (x) Period of performance/delivery date.
- (xi) Estimated number of labor hours for each applicable labor category.
- (xii) The estimated or ceiling price for the order.
- (xiii) List of Government furnished equipment, material, and information.

(2) Oral orders may be placed only in emergency circumstances. Information described above shall be furnished to the contractor at the time of placing an oral order and shall be confirmed by issuance of a written Order on DD Form 1155 within two working days.

(c) Modifications of Orders: Orders may be modified only by the Contracting Officer and may be modified orally by the Contracting Officer in emergency circumstances. Oral modifications shall be confirmed by issuance of a written modification within two working days from the time of the oral communication modifying the order.

(d) The Ceiling Price for each order may not be changed except when authorized by a modification to the Delivery Order.

(e) Unilateral Orders. Delivery Orders under this contract will ordinarily be issued after both parties agree on all items. If the parties fail to agree, the Contracting Officer may require the contractor to perform and any disagreement shall be deemed a dispute within the meaning of the "Disputes" clause.

## **ISSUANCE OF DELIVERY ORDERS**

Firm Fixed Price Delivery Orders shall be priced in accordance with the prices as shown in Section B. Each delivery order will contain, among other information, the date of the order, the order number, the exact quantity of units to be delivered, delivery or performance, place of delivery, any special shipping instructions, pricing, and accounting and appropriation data. The unit price of each delivery order will be determined by the number of units ordered on a given delivery order. Individual orders will be issued using the single price for the increment that corresponds to the total quantity being purchased on that order. Quantities specified in individual delivery orders may be modified prior to final delivery of items purchased under a particular delivery order, in which case additional quantities will be purchased at the price previously established by that delivery order. For pricing purposes, quantities are not cumulative from order to order. Delivery orders incorporate all clauses of this contract.

## **SECTION J**

### **SECTION J – LIST OF ATTACHMENTS**

#### **LIST OF ATTACHMENTS**

DOCUMENT TYPE	DESCRIPTION	PAGES	DATE
Attachment 1	Performance Specification PS-MRTB-001	25	22 Jan 09
Attachment 2	Contractor Logistics Support (CLS) Pricing	1	23 Dec 08
Attachment 3	CLS Set up parts list	1	23 Dec 08
Attachment 4	Spare Parts List	2	23 Dec 08
Attachment 5	CDRLS	22	21 Jan 09

Attachment 6	Contractor Guidance – NVTherm IP Model	3	23 Dec 08
	Input Parameters		

DISTRIBUTION LIST

Distribution List (Government)

John Wahl (Contracting Officer)

Eddie Tavares (Contract Specialist) [Eddie.Tavares@usmc.mil](mailto:Eddie.Tavares@usmc.mil)

Sherilyn Harrell

Ben Kaler

Mike Berry

Joe Bernardoni

DCMA

TBD

Contractor (Insight)

Bill Lambert ([w-lambert@raytheon.com](mailto:w-lambert@raytheon.com))

**\*\*\*Note\*\*\***

**The total number of pages on this document are 59 and not 60 as stated on pages one and two of the document.**



**UNITED STATES MARINE CORPS**  
**MARINE CORPS SYSTEMS COMMAND**  
**2200 LESTER STREET**  
**QUANTICO, VIRGINIA 22134-6050**

IN REPLY REFER TO  
JDC

JAN 09 2009

From: Chairman, Medium Range Thermal Bi-ocular Source Selection Evaluation Board  
To: Chairman, Medium Range Thermal Bi-ocular Source Selection Advisory Council

Subj.: ADDENDUM TO FINAL TECHNICAL EVALUATION REPORT FOR THE MEDIUM  
RANGE THERMAL BI-OCULAR (MRTB)

Ref.: (a) MRTB Source Selection Plan, Revised 29 May 08  
(b) MRTB Request for Proposal, Dated 29 April 08 (w/ Amendment 001 Dated 9 May 2008, Amendment 002 Dated 16 May 2008, Amendment 003 Dated 22 May 2008, and Amendment 004 Dated 27 May 2008)  
(c) MRTB Initial Technical Evaluation Report  
(d) Elcan Optical Technologies MRTB640 Technical Volume Proposal  
(e) Request for Final Proposal Dated 12 November 2008  
(f) Elcan Optical Technologies Final Proposal Revision  
(g) Second request for Final Proposal Dated 17 December 2008  
(h) Elcan Optical Technologies Revised Final Proposal Revision

Encl.: (1) Elcan MRTB640 Technical Capability Matrices

1. Per reference (a), this report is submitted for your consideration.

2. Summary

The Source Selection Evaluation Board (SSEB) met from 16 June to 20 June 2008 and 28 July to 1 August 2008 to perform an Initial Technical Evaluation in accordance with reference (a). The SSEB evaluated all seven proposals received in response to the solicitation for a Medium Range Thermal Bi-ocular (MRTB), reference (b). It is important to note that the Technical Evaluation for each Offeror was conducted strictly against MRTB program requirements in accordance with references (a) and (b). On 8 October 2008, the SSEB Chairman presented the Initial Technical Evaluation Report (ITER), reference (c), to the Source Selection Advisory Council (SSAC). In summary, it was reported in the ITER, reference (c), that six of the seven proposals all had deficiencies as defined in reference (a), resulting in overall adjectival ratings of UNACCEPTABLE with risk ratings of HIGH in accordance with reference (a). The remaining proposal, from Elcan Optical Technologies

**MRTB bidder list**

**OASYS**

POC: Vadim Plotsker  
OASYS Technology, LLC.  
645 Harvey Rd., Suite 9  
Manchester, NH 03103  
Phone: 603-232-8221

**Axsys**

POC: David B. Enos  
Axsys Technologies, Inc.  
24 Simon Street  
Nashua, NH 03060  
P: (603) 864-6443

**FLIR**

POC: Walter Gauthier  
FLIR Systems, Inc.  
25 Esquire Road  
North Billerica MA 01862  
Tel. 978-901-8884  
Email. Walter.gauthier@flir.com

**NVS**

POC: Timothy Hoffman  
542 Kemmerer Lane  
Allentown, PA 18104  
Phone - 484-664-2713  
Blackberry-(910) 584-5915

**Elcan (Submitted two bids)**

POC: Bill Lambert  
Contracts Manager  
RAYTHEON - ELCAN Optical Technologies - Texas  
1601 N. Plano Road  
Richardson, Texas 75081-1913  
P 972-344-8085

**Elbit Systems**

POC: Stewart Cohen  
220 Daniel Webster Hwy  
Merrimack, NH 03054-4844  
603-886-2332



**UNITED STATES MARINE CORPS**  
**MARINE CORPS SYSTEMS COMMAND**  
**2200 LESTER STREET**  
**QUANTICO, VIRGINIA 22134-6050**

IN REPLY REFER TO  
JDC  
24 Sep 2008

From: Chairman, Medium Range Thermal Bi-ocular Source Selection Evaluation Board  
To: Chairman, Medium Range Thermal Bi-ocular Source Selection Advisory Council

Subj.: INITIAL TECHNICAL EVALUATION REPORT FOR THE MEDIUM RANGE  
THERMAL BI-OCULAR (MRTB)

Ref.: (a) MRTB Source Selection Plan, Revised 29 May 08  
(b) MRTB Request for Proposal, Dated 29 April 08 (w/ Amendment 001 Dated 9 May 2008, Amendment 002 Dated 16 May 2008, Amendment 003 Dated 22 May 2008, and Amendment 004 Dated 27 May 2008)  
(c) Elcan Optical Technologies MRTB320 Technical Volume Proposal  
(d) Oasys Technology, LLC Technical Volume Proposal  
(e) Axsys Technologies, Inc. Technical Volume Proposal  
(f) FLIR Systems, Inc. Technical Volume Proposal  
(g) Night Vision Systems Technical Volume Proposal  
(h) Elbit Systems of America Technical Volume Proposal  
(i) Elcan Optical Technologies MRTB640 Technical Volume Proposal

Encl.: (1) Elcan MRTB320 Technical Capability Matrices  
(2) Oasys Technical Capability Matrices  
(3) Axsys Technical Capability Matrices  
(4) FLIR Technical Capability Matrices  
(5) NVS Technical Capability Matrices  
(6) Elbit Technical Capability Matrices  
(7) Elcan MRTB640 Technical Capability Matrices

1. Per reference (a), this report is submitted for your consideration.
2. Executive Summary

The Source Selection Evaluation Board (SSEB) met from 16 June to 20 June 2008 and 28 July to 1 August 2008 to perform an Initial Technical Evaluation in accordance with reference (a). Seven proposals were received from six different Vendors, with each proposal being assigned a unique letter designator as follows:

- A. Elcan Optical Technologies (MRTB320)
- B. Oasys Technology, LLC
- C. Axsys Technologies, Inc.
- D. FLIR Systems, Inc.
- E. Night Vision Systems
- F. Elbit Systems of America
- G. Elcan Optical Technologies (MRTB640)

The SSEB evaluated all seven proposals received in response to the solicitation for a Medium Range Thermal Bi-ocular (MRTB), reference (b). The evaluation consisted of a comprehensive assessment of each Offeror's Technical Volume Proposals and a review of the test events conducted from 29 May to 25 July 2008. Test events included: inspection of Offeror bid samples, laboratory measurement of bid sample performance, environmental testing in accordance with MIL-STD-810F, and a User Evaluation (UE) held 7 to 8 July 2008 at Ft A.P. Hill, VA, and 14 July 2008 at Quantico, VA. It is important to note that the Technical Evaluation for each Offeror was conducted strictly against MRTB program requirements in accordance with references (a) and (b).

The results of the SSEB Technical Evaluation are provided in this document. In summary: proposals from vendors A, B, C, D, E, and F all had deficiencies as defined in reference (a), resulting in overall adjectival ratings of UNACCEPTABLE with risk ratings of HIGH in accordance with reference (a). The remaining proposal, from Vendor G, received an overall adjectival rating of EXCELLENT with a risk rating of MODERATE in accordance with reference (a). In light of these ratings the SSEB recommends an award be made to Vendor G, Elcan Optical Technologies for their MRTB640, without discussions.

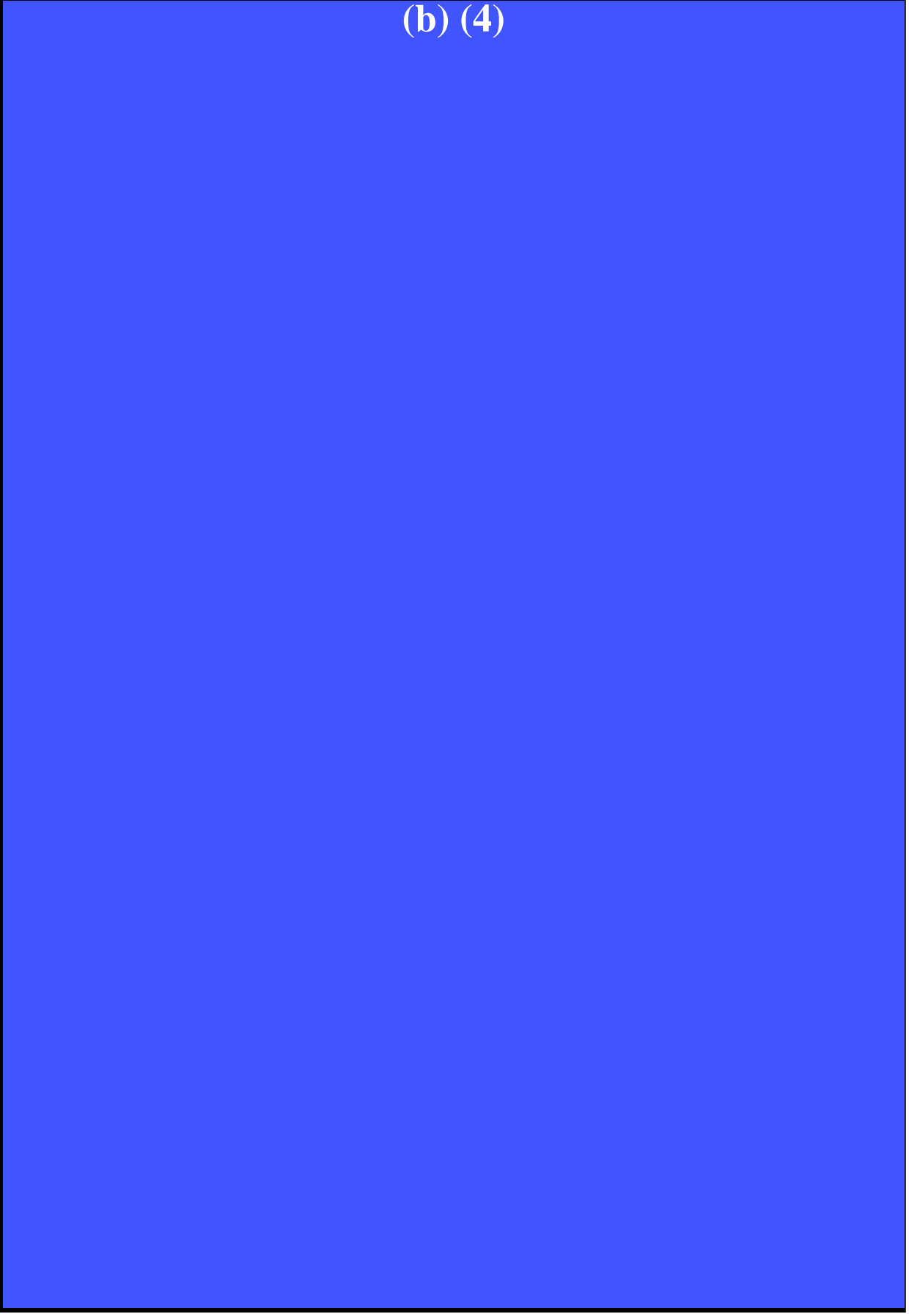
### 3. Review Results Summary

#### A. Elcan Optical Technologies MRTB320

(b) (4)

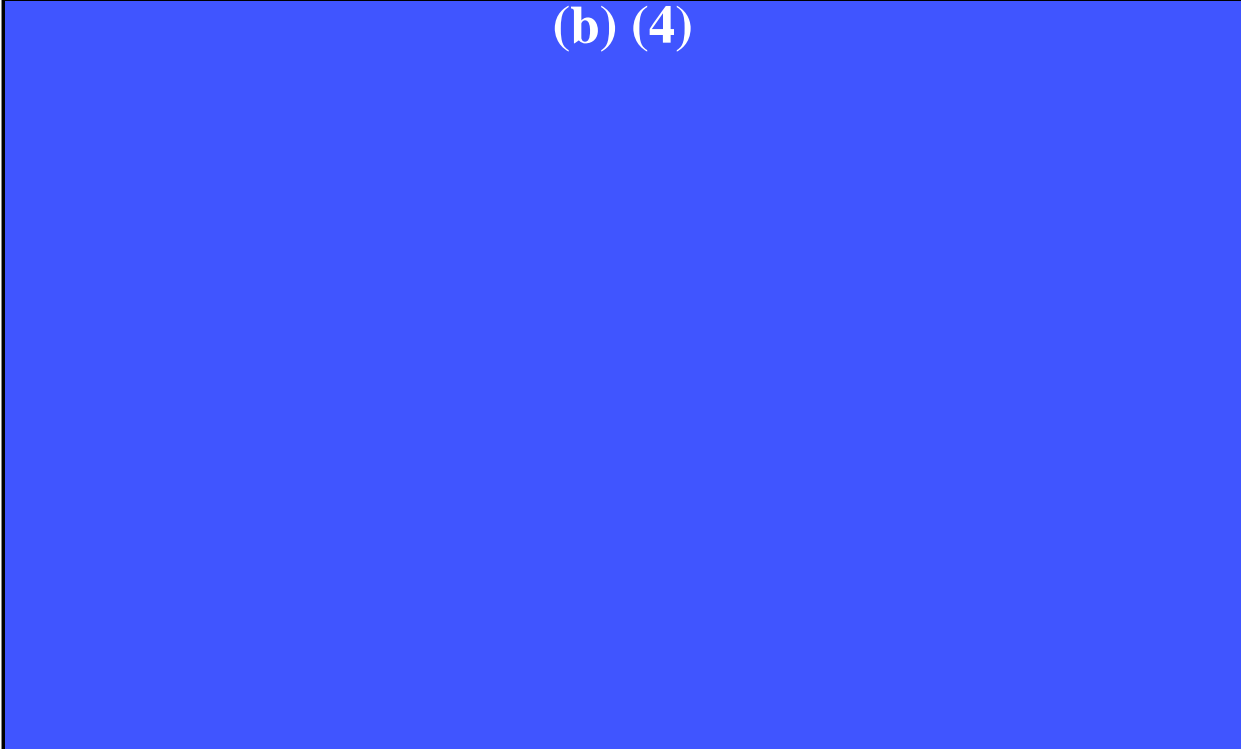


**(b) (4)**





(b) (4)



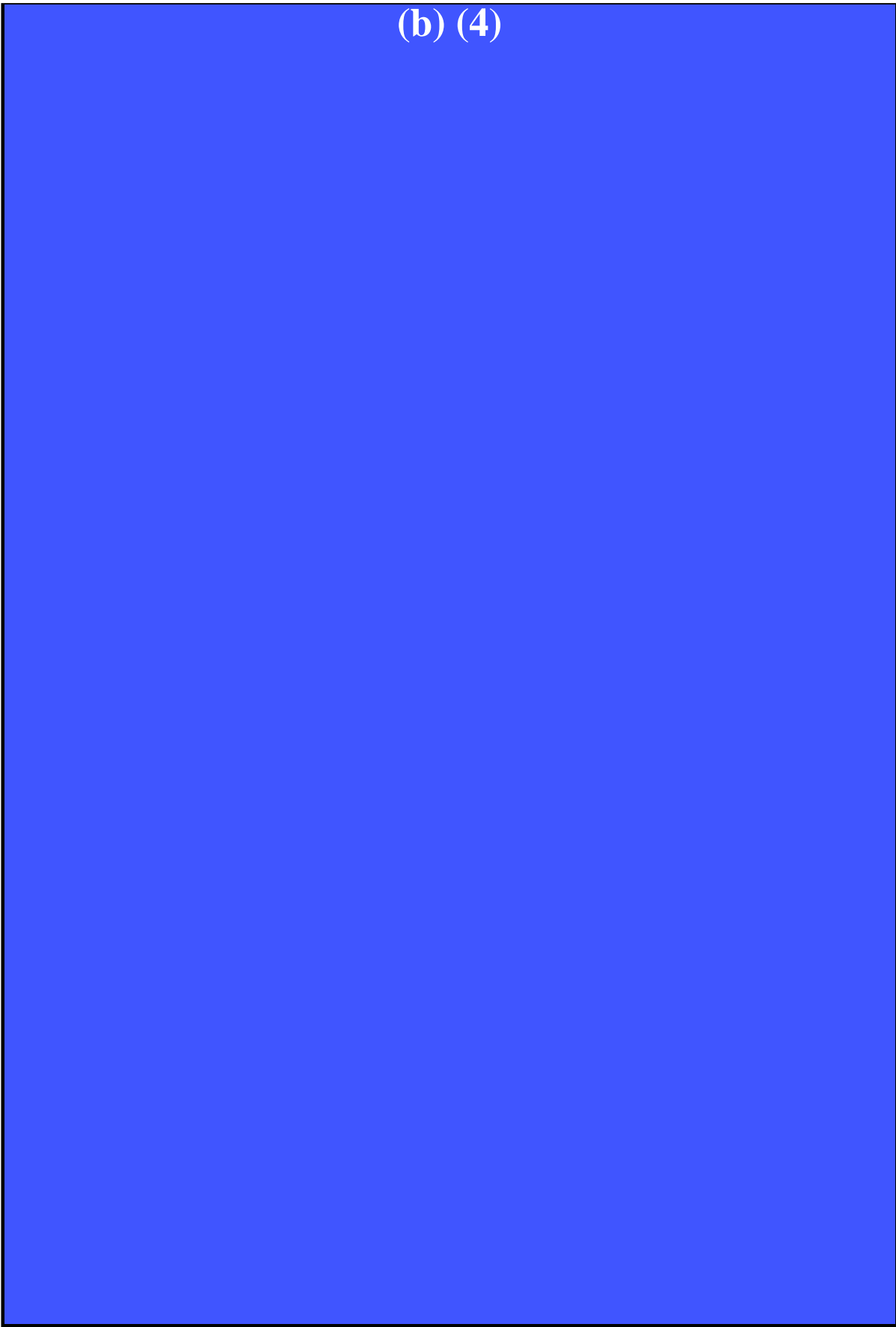
enclosure (1).

B. Oasys Technology, LLC

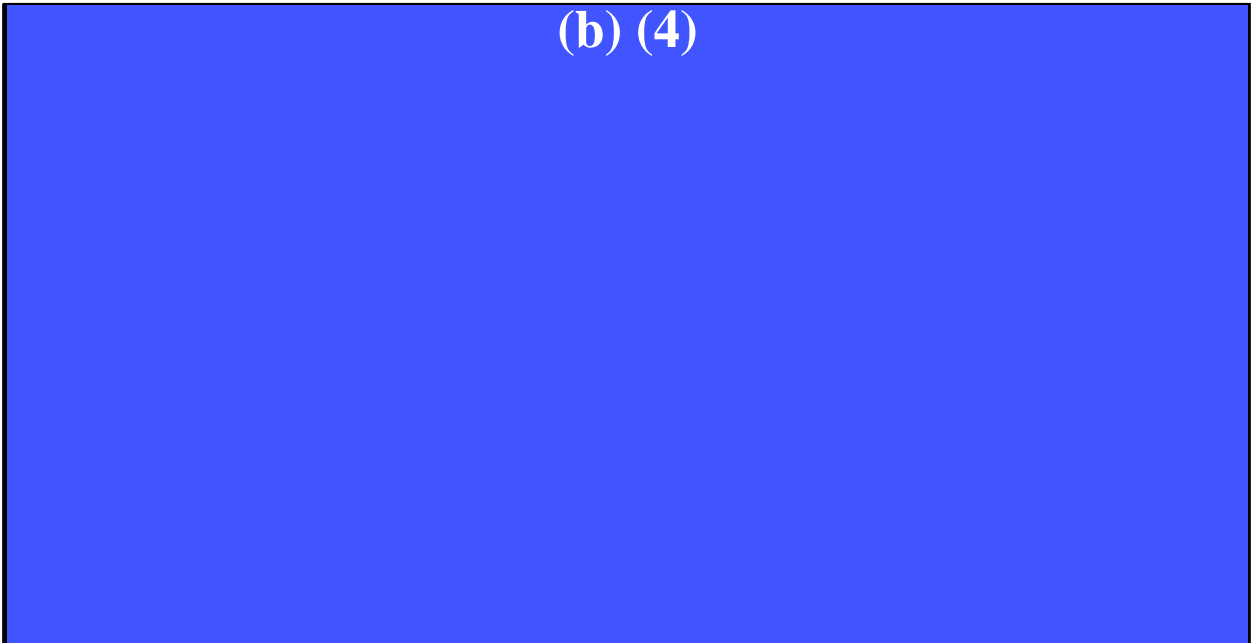
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**(b) (4)**



(b) (4)

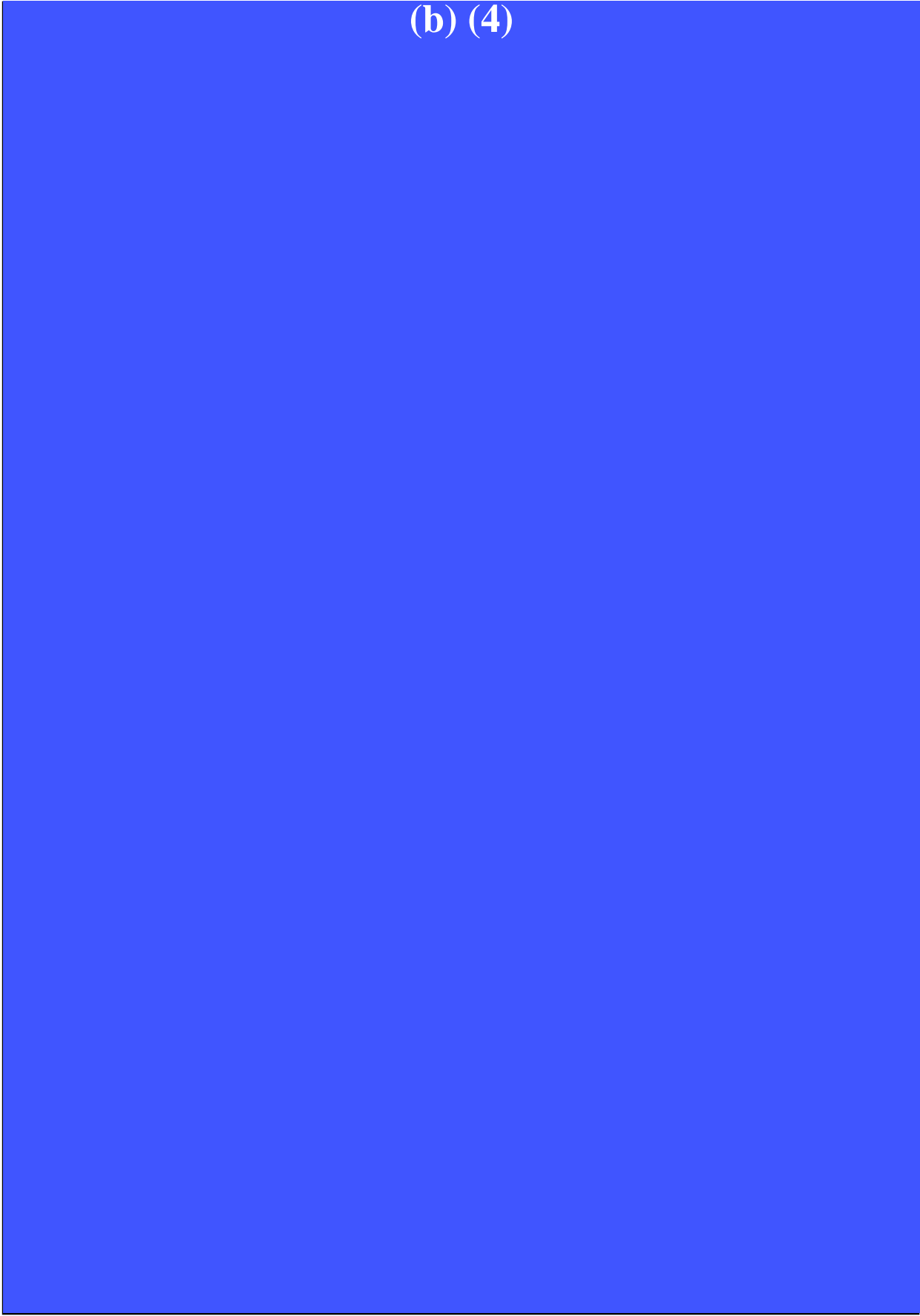


C. Axsys Technologies, Inc.

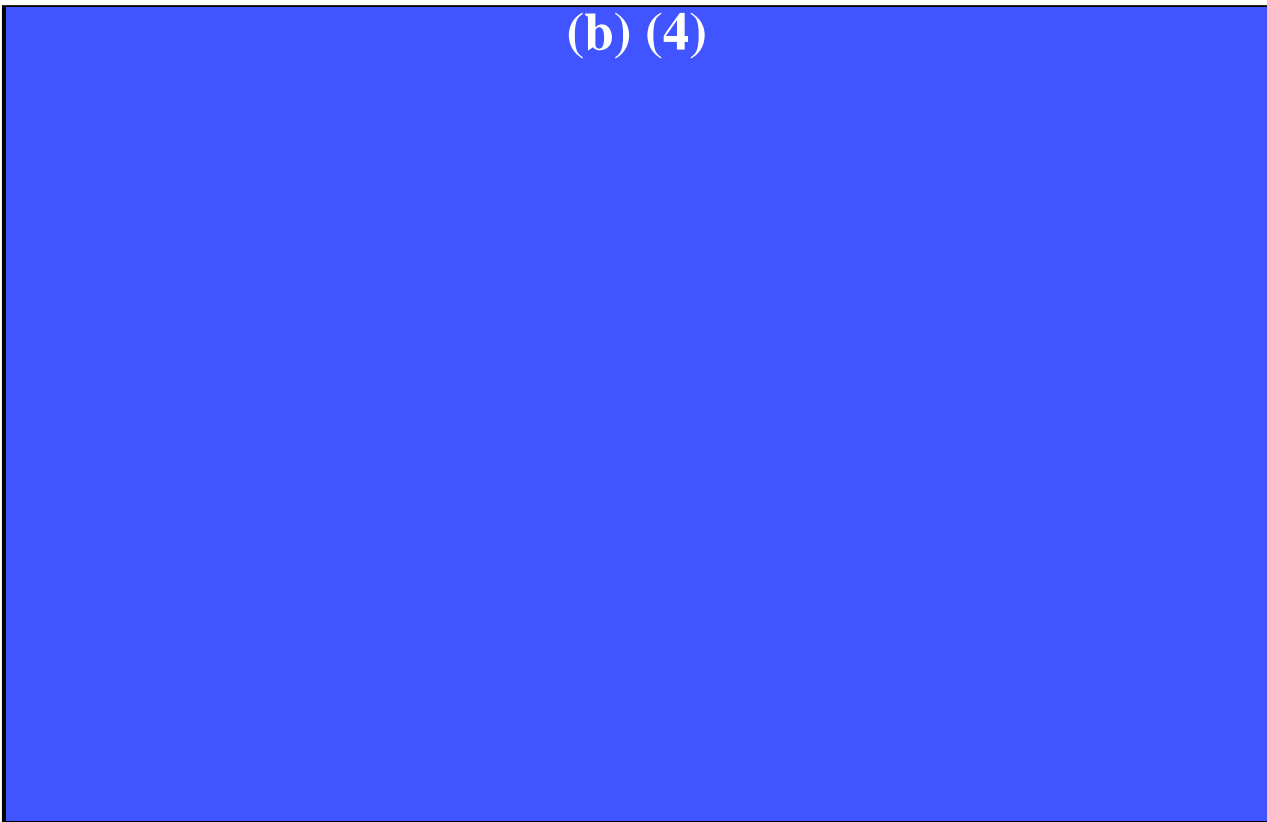
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**(b) (4)**

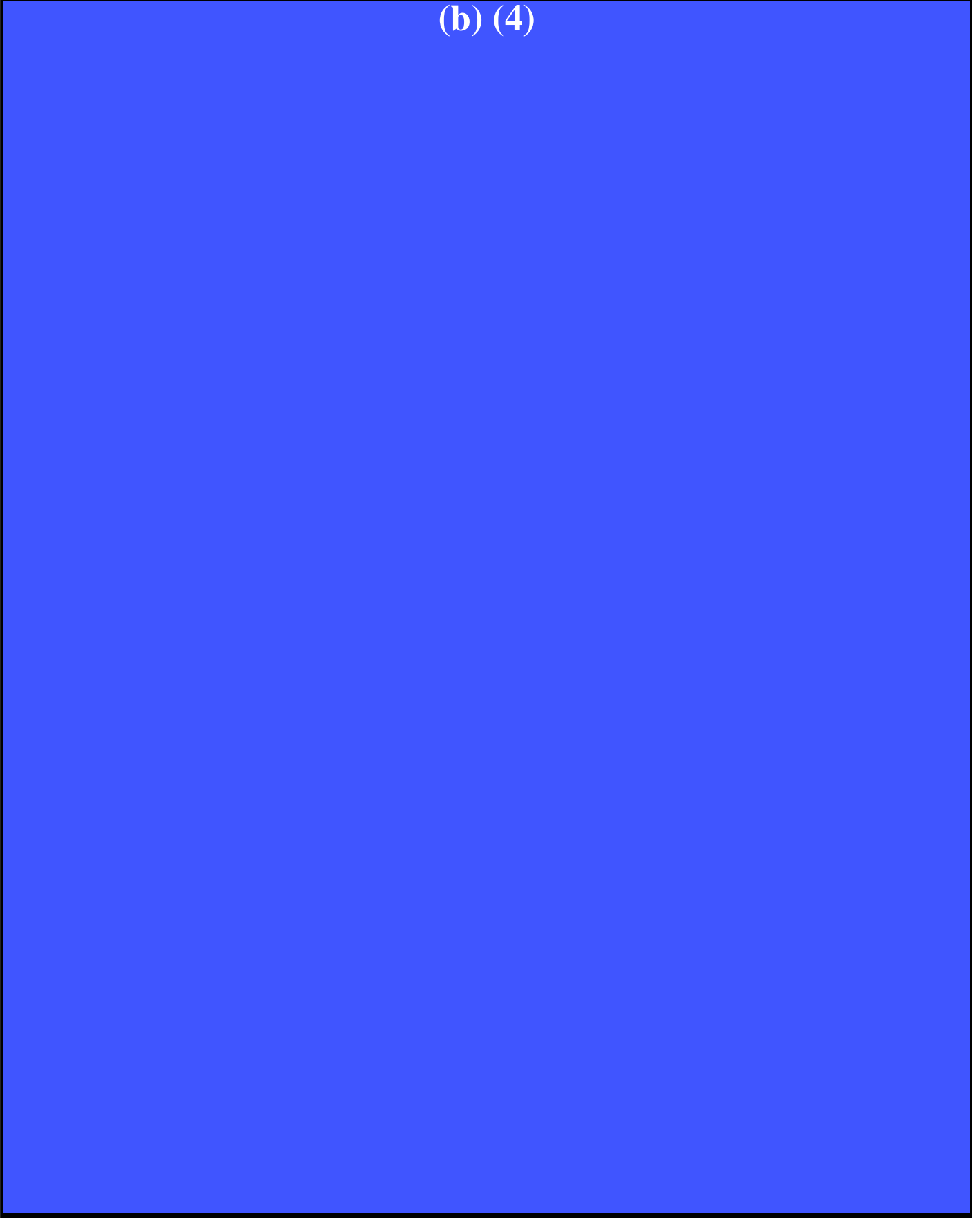


D. FLIR Systems, Inc.

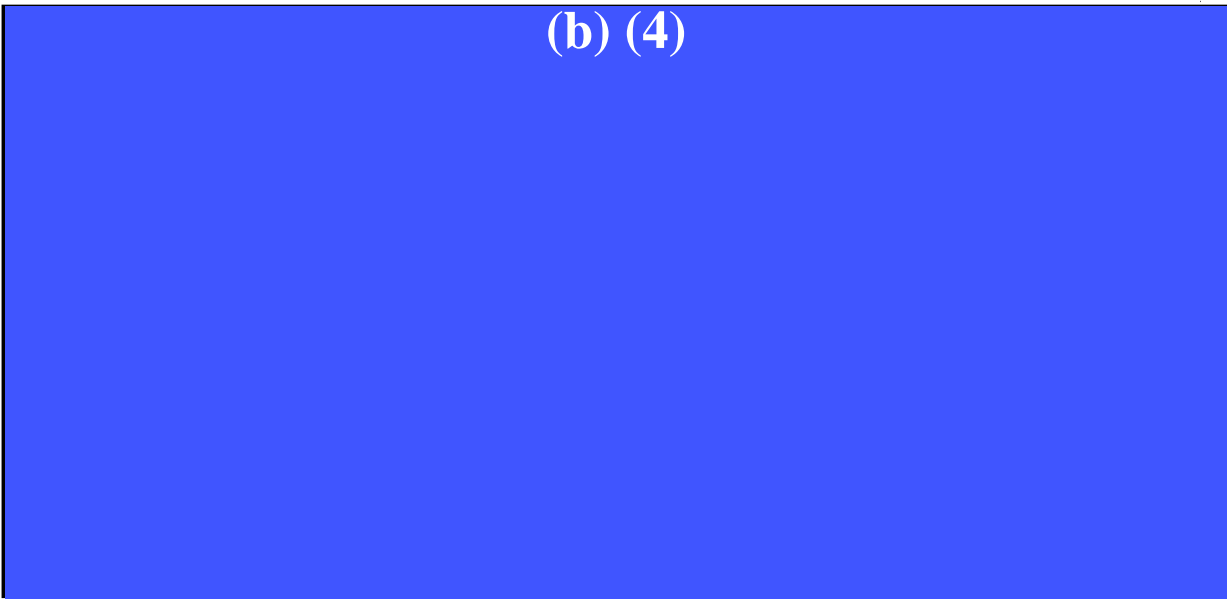
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**(b) (4)**



(b) (4)

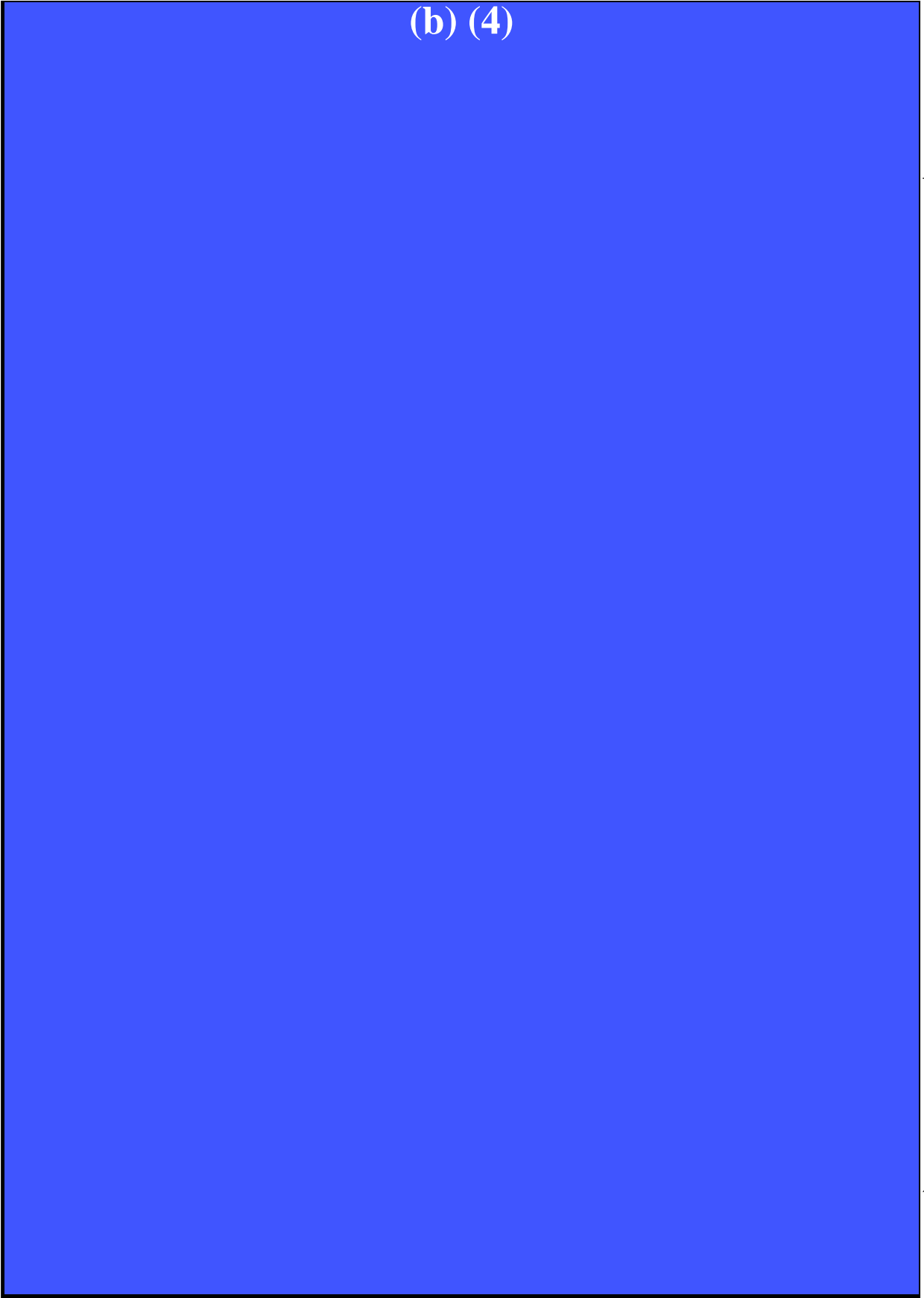


F. Night Vision Systems

(b) (4)



**(b) (4)**



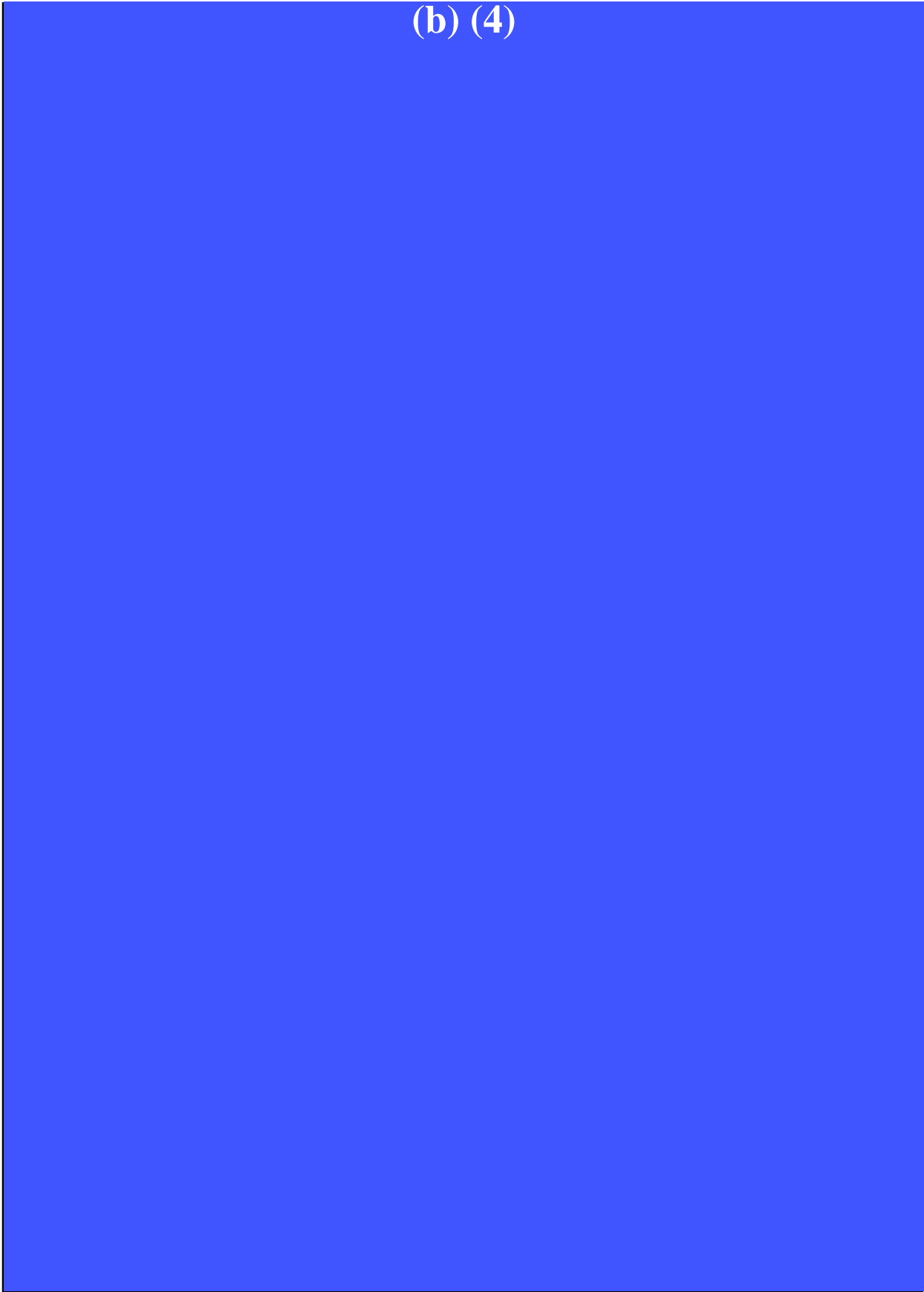


(b) (4)

F. Elbit Systems of America

(b) (4)

(b) (4)



(b) (4)

## G. Elcan Optical Technologies MRTB640

Testing and inspection of the Elcan Optical Technologies MRTB640 bid samples resulted in no deficiencies for technical performance or system suitability. A review of Elbit's MRTB640 Technical Volume Proposal, reference (i), resulted in no deficiencies for production readiness or ILS. Significant strengths, strengths, significant weaknesses, and weaknesses are outlined below, with all specific ratings and comments provided in enclosure (7). The Elcan MRTB640 proposal received an overall rating of Excellent with a risk rating of Moderate as shown in the following table in accordance with reference (a).

	Technical Performance	System Suitability	Production Readiness	ILS	Overall Rating
Technical Assessment	Excellent	Outstanding	Outstanding	Marginal	Excellent
Risk	Moderate	Moderate	Low	Moderate	Moderate

## a. Technical Performance

## i. Deficiencies

None Reported

## ii. Significant Strengths

The system exhibited eleven Significant Strengths for Technical Performance as outlined in the Technical Performance table of enclosure (7).

## iii. Strengths

The system exhibited six Strengths for Technical Performance as outlined in the Technical Performance table of enclosure (7).

## iv. Significant Weaknesses

The system exhibited one Significant Weakness for Technical Performance as outlined in the Technical Performance table of enclosure (7).

## v. Weaknesses

The system exhibited two Weaknesses for Technical Performance as outlined in the Technical Performance table of enclosure (7).

## b. System Suitability

## i. Deficiencies

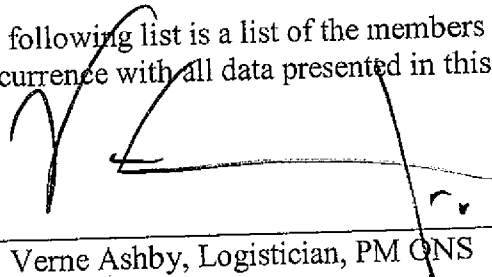
**For Official Use Only – Source Selection Sensitive**

- None Reported
- ii. Significant Strengths  
The system exhibited four Significant Strengths for System Suitability as outlined in the System Suitability table of enclosure (7).
- iii. Strengths  
None Reported
- iv. Significant Weaknesses  
None Reported
- v. Weaknesses  
None Reported
- c. Production Readiness
  - i. Deficiencies  
None Reported
  - ii. Significant Strengths  
The proposal exhibited one Significant Strength for Production Readiness as outlined in items (3) of the Production Readiness table of enclosure (7).
  - iii. Strengths  
The proposal exhibited five Significant Strengths for Production Readiness as outlined in items (1), (2), (4), (5), and (9) of the Production Readiness table of enclosure (7).
  - iv. Significant Weaknesses  
None Reported
  - v. Weaknesses  
None Reported
- d. Integrated Logistics Support (ILS)
  - i. Deficiencies  
None Reported
  - ii. Significant Strengths  
None Reported
  - iii. Strengths  
The proposal exhibited eleven Strengths for ILS as outlined in the ILS table of enclosure (7).
  - iv. Significant Weaknesses  
The proposal exhibited five Significant Weaknesses for ILS as outlined in the ILS table of enclosure (7).
  - v. Weaknesses  
The proposal exhibited 16 Weaknesses for ILS as outlined in the ILS table of enclosure (7).

4. Conclusion

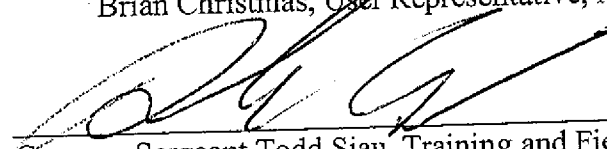
The SSEB has achieved consensus, and believes the conclusions reached for each Offeror are in accordance with reference (a). Deficiencies in the proposals and bid sample submissions of Vendors A, B, C, D, E, and F resulted in overall adjectival ratings of UNACCEPTABLE with risk ratings of HIGH in accordance with reference (a). Specifically, it is the opinion of the SSEB that material failures of the bid sample submissions from Vendors A, B, C, D, E, and F to meet environmental testing requirements (system suitability) from the performance specification in reference (b) would require each Vendor to provide a root-cause analysis of their respective system's failure(s) along with a potential solution, which then must be evaluated by the SSEB after testing against the requirements; these actions will introduce significant risk to performance and schedule. Additionally, bid samples from Vendors A, C, D, and F failed to meet other (non-environmental) requirements from the performance specification in reference (b) during laboratory testing. It is the opinion of the SSEB that these deficiencies are not correctable without a redesign, introducing significant risk to performance and schedule. Vendor G's proposal and bid sample submission received an overall adjectival rating of EXCELLENT with a risk rating of MODERATE in accordance with reference (a).

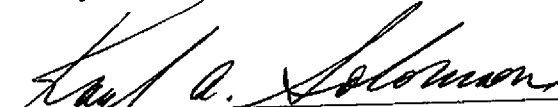
5. The following list is a list of the members of the SSEB and their signatures verifying their concurrence with all data presented in this document.

  
Mr. Verne Ashby, Logistician, PM ONS

*See Attached*  
Mr. Rex Baker, Equipment Specialist, PM ONS

*See Attached*  
Brian Christmas, User Representative, MCCDC

  
Gunnery Sergeant Todd Siau, Training and Fielding Officer, PM ONS

 10/3/08  
Mr. Karl Solomon, Lead Engineer, PM ONS

Respectfully Submitted,

  
DR. JONATHAN D. CURLEY  
CHAIRMAN, MEDIUM RANGE THERMAL BI-OCULAR  
SOURCE SELECTION EVALUATION BOARD

**For Official Use Only – Source Selection Sensitive**

5. The following list is a list of the members of the SSEB and their signatures verifying their concurrence with all data presented in this document.

\_\_\_\_\_  
Mr. Verne Ashby, Logistician, PM ONS

  
\_\_\_\_\_  
Mr. Rex Baker, Equipment Specialist, PM ONS

\_\_\_\_\_  
Major Brian Christmas, User Representative, MCCDC

\_\_\_\_\_  
Gunnery Sergeant Todd Siau, Training and Fielding Officer, PM ONS

\_\_\_\_\_  
Mr. Karl Solomon, Lead Engineer, PM ONS

Respectfully Submitted,

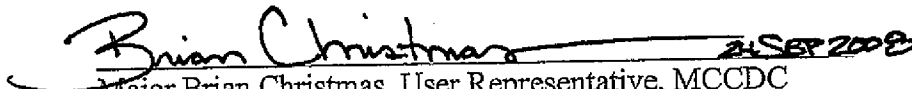
DR. JONATHAN D. CURLEY  
CHAIRMAN, MEDIUM RANGE THERMAL BI-OCULAR  
SOURCE SELECTION EVALUATION BOARD



5. The following list is a list of the members of the SSEB and their signatures verifying their concurrence with all data presented in this document.

\_\_\_\_\_  
Mr. Verne Ashby, Logistician, PM ONS

\_\_\_\_\_  
Mr. Rex Baker, Equipment Specialist, PM ONS

  
Major Brian Christmas, User Representative, MCCDC

\_\_\_\_\_  
Gunnery Sergeant Todd Siau, Training and Fielding Officer, PM ONS

\_\_\_\_\_  
Mr. Karl Solomon, Lead Engineer, PM ONS

Respectfully Submitted,

DR. JONATHAN D. CURLEY  
CHAIRMAN, MEDIUM RANGE THERMAL BI-OCULAR  
SOURCE SELECTION EVALUATION BOARD


**SECTION I – COVER AND SIGNATURE PAGES**

Type of Procurement Action: <input type="checkbox"/> Sealed Bidding <input checked="" type="checkbox"/> Full and Open Competition <input type="checkbox"/> Negotiated Under 10 U.S.C. 2304(b)( ) <input type="checkbox"/> Negotiated Under 10 U.S.C. 2304(c)( ) <input type="checkbox"/> Negotiated Under 40 U.S.C. 541 Brooks Act <input type="checkbox"/> Negotiated Pursuant to Changes Clause <input type="checkbox"/> Claim Settlement <input type="checkbox"/> Definitization of Letter Contract <input type="checkbox"/> Final Price (Incentive, Redeterminable, or EPA)		Type of Clearance: <input checked="" type="checkbox"/> Pre-Negotiation <input type="checkbox"/> Post Negotiation <input type="checkbox"/> Letter Contract	
Solicitation/Contract Number: M67854-08-R-1076 Activity: MCSC PG-13 IWS, PM ONS			
Contractor(s): Elcan Optical Technologies  Name: ELCAN Optical Technologies City/State: 1601 N. Plano Road, Richardson, TX 75081-1913			
Program: PM ONS  Description of Supplies/Services: Medium Range Thermal Bi-Ocular capable of providing an individual thermal imaging capability to the Marine Rifle Squad, Machine Gun Squad, and other Marine Corps units, engaging in offensive and defensive operations.			
Pricing Structure:	Proposal	Pre-Negotiation	Post-Negotiation
Cost (Excluding COM) Cost of Money Total Cost Fee/Profit (    %) Base Fee (    %) Award Fee (    %) Total Ceiling Price Sharing Arrangement: Clearance Total:			
Performance Period: Start: Date of award                      Finish: Five (5) years after award  Or Deliveries: First    Final			
Prepared By: Name: Eddie Tavares Title: Contract Specialist Phone: 703-432-3632 Date: 24 Sep 08			

## Recommendation:

Based on the information contained herein, authorization is requested to begin negotiations that lead to the award of contract M67854-08-D-1076, for the procurement of the Medium Range Thermal Bi-Ocular (MRTB) valued at approximately \$180,000,000.00.

## Contracting Officer:

Signature: 

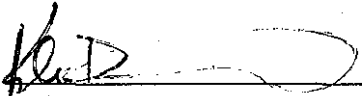
John Wahl

Contracting Officer, PMONS

Phone: 703 432 3568

Date: 11-6-08

## Legal Counsel:

Signature: 

Major Kyle Murray

Office of Counsel

Phone: 703-432-3885

Date:

## Reviewer:

Signature: 


David R. Mahr

Lead Contracting Officer, (CT-021) PG 13, IWS

Phone: 703-432-3724

Date: 11/6/08

## Approval:

Signature: 

William Randolph

Assistant Commander for Contracts (CT 02)

Phone: 703-432-3947

Date:

Unconditional Approval ☒Not Approved ☐Conditional Approval ☐

Conditions (If applicable):

**SECTION II – KEY DOCUMENTS/EXHIBITS/ATTACHMENTS****A. Summary of Key Documents:****1. Synopsis and Solicitation (including Amendments)**

	<b>Issuance Date</b>	<b>Closing Date</b>	<b>Purpose of Amendment</b>
Synopsis	14 April 2008	28 April 2008	
Solicitation Number: M67854-08-R-1076	28 April 2008	29 May 2008	
Amendment 0001	9 May 2008		Answer initial questions,
Amendment 0002	16 May 2008		Answer second set of questions, update section H,L, and CDRLS
Amendment 0003	22 May 2008		Answer third set of questions, update proposed date and time for LUE
Amendment 0004	27 May 2008		Answer fourth set of questions, update proposed date and time for LUE
Amendment 0005	10 July 2008		Clarify Production Facility Readiness Report requirements

**2. Offers**

<b>Offeror Name</b>	<b>Date of Offer</b>
Elcan Optical Technologies MRTB 320	29 May 2008
Oasys Technology, LLC	29 May 2008
Axsys Technologies, Inc.	29 May 2008
FLIR Systems, Inc.	29 May 2008
Night Vision Systems Proposal	29 May 2008
Elbit Systems of America Proposal	29 May 2008
Elcan Optical Technologies MRTB640	29 May 2008

## B. References

Reference	Title	Date
a	MRTB Source Selection Plan, Revised (Attached)	29 May 2008
b	RFP M67854-08-R-1076 w/ five (5) amendments (Attached)	28 April 2008
c	Source Selection Evaluation Board (SSEB) Initial Technical Evaluation Report (ITER) (Attached)	24 September 2008
d	Single Award Determination and Findings (Attached)	Pending ASN RD&A signature
e	Acquisition Strategy/Acquisition Plan (AS/AP) (Attached)	20 Oct 2008

**Section III – PRE-SOLICITATION INFORMATION**

The purpose of this business clearance memorandum is to enter into negotiations with Elcan Optical Technologies. Negotiations are needed to discuss Elcan's pricing scheme and to address technical weaknesses outlined within their proposal.

## A. Description of Supplies/Services

Reference (b) calls for the acquisition of a Medium Range Thermal Bi-Ocular (MRTB) capable of providing an individual thermal imaging capability to the Marine Rifle Squad, Machine Gun Squad, and other Marine Corps units engaging in offensive and defensive operations. The MRTB will be an Acquisition Category (ACAT) IV (M) program.

## B. Background

## Procurement history

The Acquisition Decision Memorandum (ADM) dated 17 June 2005, designated the Thermal Binocular System (TBS) program as an ACAT IV (T), and assigned the Milestone Decision Authority to the Director, Infantry Weapons Systems (IWS). The TBS program was split into two distinct programs in 4<sup>th</sup> Qtr FY06 to better manage the two disparate product lines, which included the AN/PAS-22 Long Range Thermal Imager (LRTI) and the Tactical Range Thermal Imager (TRTI). The 5 September 2006 Capability Production Document was approved to support this program split. The TRTI program was subsequently terminated for the convenience of the Government on 22 December 2006. The 14 January 2008, CPD established the United States Marine Corps' need for an Medium Range Thermal Bi-ocular (MRTB) capable of providing an individual thermal imaging capability to the Marine Rifle Squad, Machine Gun Squad, and other Marine Corps units engaging in offensive and defensive operations. Thermal imaging augments image intensifier (I<sup>2</sup>) head/helmet mounted systems such as the AN/PVS-7's and AN/PVS-14's, and weapon mounted systems such as the AN/PVS-17, by providing all weather

imaging capability in all lighting conditions, including total darkness. This mitigates a capability gap, by enabling target detection and recognition in conditions that day-optics and I2 devices cannot operate. The MRTB CPD established the need to enhance a Marine's ability to observe/orient, detect and recognize targets, conduct surveillance and assist in accurately engaging targets by fires under obscured atmospheric conditions and all lighting scenes, including total darkness.

## 2. Acquisition environment

In meeting the need for the MRTB the Government sought full and open competition, by selecting one offer on the basis of its proposal providing the "best value" to the Government, all factors considered.

As part of market research procedures (FAR 10.002(b)(2)) the Government issued RFI M67854-08-I-1076 outlining the performance specifications of the MRTB and inviting industry to a pre-bidders conference designed to determine if the market could meet the new requirements for the MRTB.

## C. Historical Cost Estimate

The MRTB program will be procured with FY07 funding and FY08 Supplemental Funds. The total projected procurement cost for this program is \$109,700,000.00. If a requirement is received to increase the AAO of 4744 systems for the MRTB, additional funding will be acquired through reprogramming or supplemental funding requests. The FFP IDIQ contract will be capped at 10,000 MRTB units for a maximum value of \$180,000,000. The difference between the AAO and the FFP IDIQ contract cap exists to provide flexibility and a contract venue for other service components to participate if MRTB requirements are received.

## D. Type of Contract

### Indefinite Delivery Indefinite Quantity

A multi-year Indefinite Delivery Indefinite Quantity (ID/IQ) contract has been identified as the best vehicle for use in the procurement of the MRTB and supporting equipment. The proposed multi-year ID/IQ will encompass a five (5) year period of performance in order to take maximum advantage of locking in long term firm fixed prices for future purchases of the MRTB and supporting equipment. The use of such a vehicle would create substantial continuity of production and performance, thus avoiding annual startup costs, preproduction testing costs, make-ready expenses, and phase out costs.

## E. Source Selection Planning

## 1. Source Selection Process

Per references (a) and (b), a two phase source selection approach utilizing a Best Value Continuum has been implemented in selecting a viable candidate for the MRTB. Section M (Evaluation Factors for Award) informed all potential offers of the Government's intention to select one offeror on the basis of its proposal providing the "best value" to the Government, all factors considered.

During Phase One, the Government evaluated each offeror(s)' written proposals along with their three (3) MRTB bid samples. During the initial evaluation, the Government evaluated each offeror's technical approach and their proposed pricing. The Government also conducted baseline testing, performance verification and characterization assessment, environmental compliance with MIL-STD-810F verification, and a User Evaluation (UE).

Reference (b) informed Offerors that if the Government elected to hold discussions, a competitive range of qualifying offerors would be established, and the source selection would then enter Phase Two. During this phase the Government would open discussions/negotiations with all offeror(s) whose proposals remained in the competitive range following Phase One. Offerors were also informed that if Phase Two was necessary, the Government would hold discussions in accordance with FAR 15.306.

## 2. Factors for Award

In making its "best value" determination, the Government considered the following factors, in order of descending importance (from most to least important):

a. **Factor 1: Technical Capability**

The first and most heavily weighed factor is Technical Capability. There are four sub factors within this factor. Those sub factors include, Technical Performance, System Suitability, Production Readiness, and Integrated Logistics Support (ILS). Below are the detailed definitions of each sub factor for under technical capability:

- i. **Technical Performance.** The Government will assess the Offeror's bid samples to ensure that the MRTB meets the minimum performance attributes including the three Key Performance Parameters (KPP) for weight, target recognition range, and bi-ocular configuration. Testing and assessment will include procedures provided in TM 110640OI.
- ii. **System Suitability.** The Government will evaluate the Offeror's proposal and bid samples to assess compliance with the Performance Specification requirements and to determine the Offeror's systems suitability to provide the Marine with enhanced capability to acquire targets in a reduced visibility environment.



- iii. Demonstrated production facilities, production equipment, work instructions, personnel and manpower of requisite skill, test and diagnostic equipment, production management, quality assurance, subcontracts, certifications and accreditations, supply chain management to validate commercial production status of the Offeror's product in accordance with FAR Part 12.
- iv. Demonstrated understanding of the supportability elements affecting the successful execution of the contract coupled with a comprehensive approach to achieving an effective ILS capability throughout all phases of the program. Supportability considerations shall include all facets of the Offeror's technical and management approach, respective of risk, price, and overall market position.

**b. Factor 2: Past Performance**

The second factor for award is Past Performance. Past performance data was collected, analyzed, and evaluated using the Guide to Past Performance Version 3 as the reference. PM ONS approved questionnaires were sent to points of contact provided by offerors as well as to secondary and tertiary points of contact. Each offeror was also researched in the Past Performance Information Retrieval System (PPIRS).

**c. Factor 3: Price**

The third and final factor for award is price. As listed in reference (b), prices were evaluated, but not rated. In order to conduct an accurate evaluation of all prices, the Contract Specialist established three separate notional baskets of goods for a complete system (MRTB), CLS, and spare parts. Three separate notional baskets of goods were used in order to isolate the variables that existed among the offerors proposals. All stepladder prices were evaluated by obtaining the mid point weighted average of each incremental step ladder and then summing the incremental weighted unit prices of the given year to yield a final mid-point weighted average price multiplied by a notional quantity.

**F. Special Provisions**

**1. Single Award Determination and Findings**

The contracting officer made a determination, in writing, that a single-award ID/IQ contract best meets the need for filling the requirement of the MRTB. In accordance with the OUSD (AT&L) DPAP Memo of 23 May 2008-09-22A that determination must be made by ASN RDA. Subsequently, a D&F along with an action memo requesting a determination that Section 2304a of Title 10 United States Code does not apply for the award of the MRTB was forwarded to ASN RDA for approval on 26 September 2008. To date, this approval has not yet been granted. However, it is expected to be granted prior to award of the MRTB.

## 2. Use of Contractor Personnel Determination and Findings

On April 25, 2008 the Assistant Commander for Contract, Mr. William Randolph, approved the use of contractor personnel to serve as consultants on the source selection of the MRTB in accordance with FAR sub parts 37.203, 37.204 and NMCARS 5237.204. The decision was based on the fact that the required number of personnel with sufficient expertise to support the program requirements could not be identified within the Government.

## G. Solicitation Review and Compliance

## 1. Request for Proposal

Reference (b) was created under the guidelines stated in reference (a). All evaluation factors for award created in reference (a) were transferred and advertised in reference (b). Section M of reference (b) provided offerors with all factors for award as well as the necessary performance specifications for meeting the requirements of the MRTB. A legal review of the reference (b) was obtained prior to posting the requirement.

## H. Synopsis

A synopsis was posted via the Government-wide Point of Entry (GPE) on 14 April, 2008.

**SECTION IV – PRE-SOLICITATION COMPLIANCES** (If approval/determination was included in another document, please note):

Check if N/A	DOCUMENT/APPROVAL CHECKLIST	Document Number, Approving Official & Date
√	Acquisition Strategy (FAR 34.004) or Management Oversight Process for Acquisition of Services (NMCARS 5237.503)	
	Acquisition Plan (DFARS 207.103)	Col Shawn Reinwald, Director PM IWS – 20 October 2008
√	Waiver of Synopsis (FAR 5.202)	
√	Determinations and Findings (D&F) to exclude a source (FAR 6.202)	
√	Determination and Findings (D&F) for the Public Interest circumstances permitting Other Than Full and Open Competition (FAR 6.302-7)	
√	Justification for Other Than Full and Open Competition (FAR 6.303)	
√	Bundling contract requirements (FAR 7.107(c))	
√	Determination to consolidate contract requirements (DFARS 207.170-3)	

**SOURCE SELECTION INFORMATION – SEE FAR 2.101 and 3.104**

Check if N/A	DOCUMENT/APPROVAL CHECKLIST (con't)	Document Number, Approving Official & Date
	Determination of Commercial Item for FAR Part 12 Over \$1M (DFARS 212.102(a)(i))	John Wahl, Contracting Officer – 4 April 2008
√	Determination to Use Commercial T&M or LH contract (FAR 12.207)	
	Source Selection Plan (DFARS 215.303)	Mr. Dave Marr, SSA – 15 April 2008
√	Contract type determination (FAR 16.102(d)) (See FAR 16.601(d)(1) for Time & Materials or Labor Hours)	
	Determination to use a Single Award ID/IQ contract (Section 2304a of Title 10)	D&F 12,459, Mr. Sean J. Stackley, ASN (RD&A) – Unsigned
√	Award Fee Plan (FAR 16.405-2(b), PGI 216.405-2, PGI 216.470)	
√	HCA Determination to Use CPAF (DPAP memo April 24, 2007)	
√	Use of contract terms in excess of five years (FAR 17.204(e))	
√	Use of non-DoD contract vehicle (NMCARS 5217.7802)	
	DD Form 2579 Small Business Coordination Record (DFARS 219.201)	Ms. Jeraline Artis, SBS – 15 April 2008
√	Approval for expedited completion date for MILCON (DFARS 236.270)	
√	Authority to Contract out for Personal Services (NMCARS 237.104(b)(i))	
√	Determination of Personal/Non-Personal Services (FAR 37.103)	
√	Non-performance based acquisition (DFARS 237.170-2)	
	Determination to use contractor personnel (FAR sub parts 37.203, 37.204 and NMCARS 5237.204)	Mr. William C. Randolph, HCA Delegated 25 April 2008
√	Approval to use warranty (DFARS 246.704)	

## SECTION V – SOLICITATION

### A. Synopsis and Solicitation

The solicitation process began with the Government conveying its MRTB requirements via two pre-solicitation conferences (hosted 20 Feb 07 and 8 May 07), and an RFI Conference hosted 5 December 2008. On 14 April 2008, a synopsis was issued to industry which outlined the need for the Marine Corps to procure an estimated 4744 MRTB systems along with Integrated Contractor Logistics Support (ICLS). The synopsis informed industry of the Government's intention to issue an RFP by 25 April, 2008. On 28 April, 2008 RFP M67854-08-D-1076 was issued with a closing date of 29 May 2008.

**B. Amendments**

Five amendments, as outlined in Table 1 below, were issued to the RFP via the GPE.

Table 1: Amendments

Amendment Number	Date Issued	Purpose
0001	9 May 2008	Answers initial questions received from industry
0002	16 May 2008	Answer second set of questions, update section H,I, and CDRLS
0003	22 May 2008	Answer third set of questions, update proposed date and time for LUE
0004	27 May 2008	Answer fourth set of questions, update proposed date and time for LUE
0005	10 July 2008	Clarify Production Facility Readiness Report requirements

**C. Evaluation of offers**

Seven (7) proposals from six (6) companies were received by the closing date of 29 May 08 in response to reference (b). Proposal evaluations were split into two categories. The Source Selection Advisory Council SSAC took ownership of all Business Volumes and evaluated Past Performance and Price. The SSEB took ownership of all Technical Volumes along with three (3) bid samples from each offeror and evaluated them against the requirements of the RFP.

The Source Selection Evaluation Board (SSEB) met from 16 June to 20 June 2008 and 28 July to 1 August 2008 to perform an Initial Technical Evaluation in accordance with reference (a). The SSEB evaluated all seven proposals received in response to the solicitation for the Medium Range Thermal Bi-ocular (MRTB), reference (b). The evaluation consisted of a comprehensive assessment of each offeror's Technical Volume Proposals and a review of the test events conducted from 29 May to 25 July 2008. Test events included: inspection of Offeror bid samples, laboratory measurement of bid sample performance, environmental testing in accordance with MIL-STD-810F, and a User Evaluation (UE) held 7 to 8 July 2008 at Ft A.P. Hill, VA, and 14 July 2008 at Quantico, VA.

The results of the SSEB Technical Evaluation are summarized below in section VI. Detailed results of the technical evaluations are provided in the Initial Technical Evaluation Report (ITER), attachment three (3).

In accordance with reference (a), the SSAC assumed the responsibility of reviewing Past Performance and Price for each offer. On 16 September 2008 the SSAC convened to

discuss its finding of the evaluations of factors two and three of the RFP. The results of these findings are detail below in section VI of the BCM.

## SECTION VI – PRE-NEGOTIATION ANALYSIS

The Government's pre-negotiation analysis includes the details resulting from the Business and Technical evaluations of all seven (7) offers received. All offers were evaluated using the guidelines of references (a) and (b). In its evaluation of prices, the Government relied heavily on all of the Other Than Cost and Pricing Data provided by the contractor.

### Evaluation Factors:

#### A. Technical Capability (Factor 1)

##### 1. Technical Evaluation Summary

The detailed results of the SSEB Technical Evaluation are provided in attachment three (3). A detailed summary is captured below to illustrate the findings of the SSEB.

Seven (7) proposals were received from six (6) different vendors, with each proposal being assigned a unique letter designator as follows:

- A. Elcan Optical Technologies (MRTB320)
- B. Oasys Technology, LLC
- C. Axsys Technologies, Inc.
- D. FLIR Systems, Inc.
- E. Night Vision Systems
- F. Elbit Systems of America
- G. Elcan Optical Technologies (MRTB640)

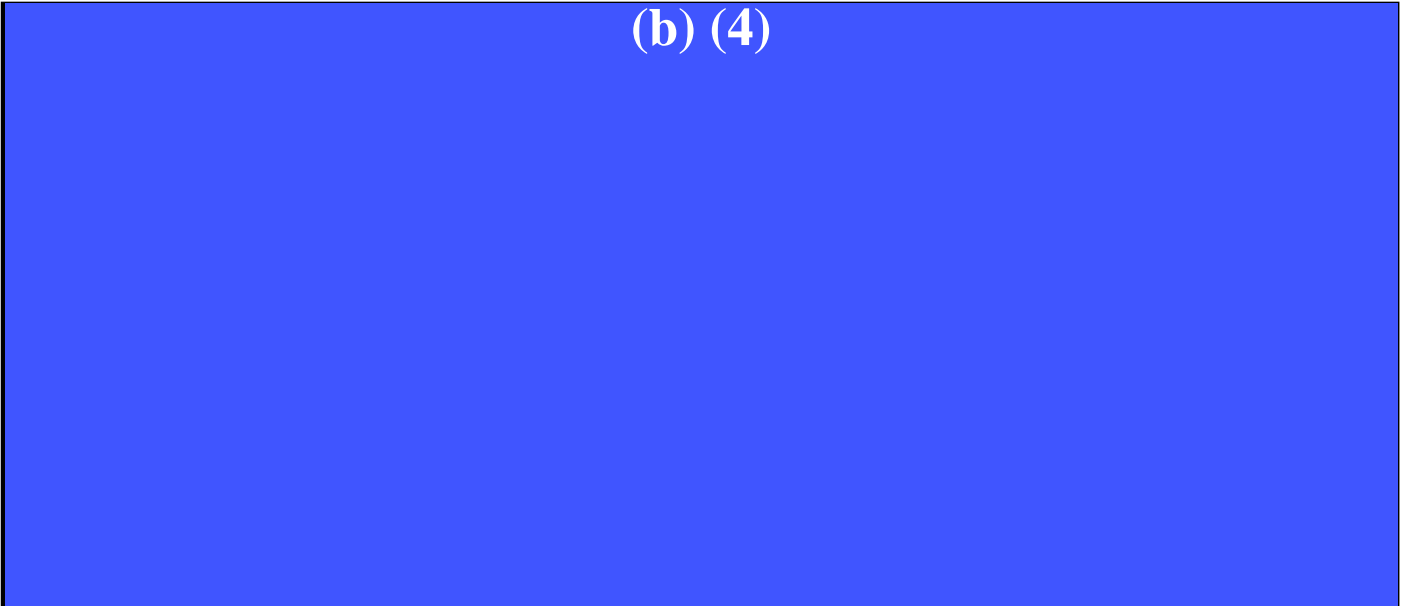
In summary: proposals from vendors A, B, C, D, E, and F all had deficiencies as defined in reference (a), resulting in overall adjectival ratings of UNACCEPTABLE with risk ratings of HIGH in accordance with reference (a). The remaining proposal, from Vendor G, received an overall adjectival rating of EXCELLENT with a risk rating of MODERATE in accordance with reference (a).

##### 2. Results Summary

a. Elcan Optical Technologies (b) (4)

(b) (4)

(b) (4)



b. Oasys Technology, LLC

(b) (4)

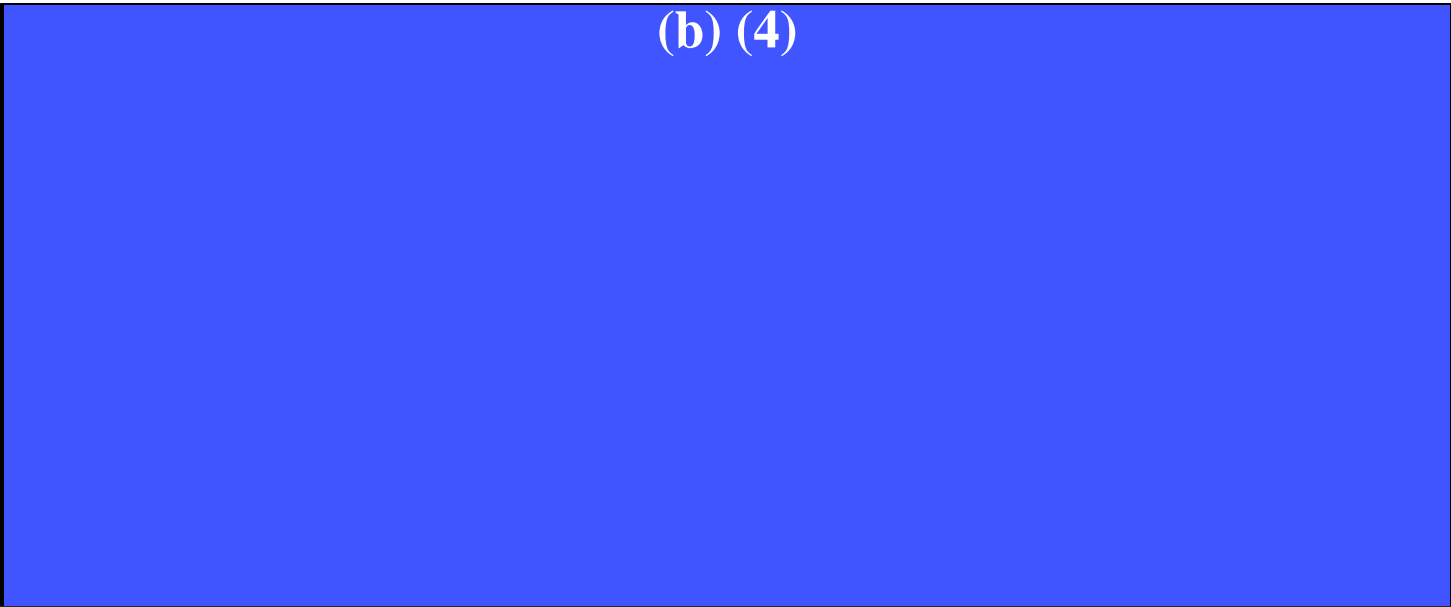


c. Axsys Technologies, Inc.

(b) (4)



(b) (4)



d. FLIR Systems, Inc.

(b) (4)



e. Night Vision Systems

(b) (4)





(b) (4)

f. Elbit Systems of America



(b) (4)

g. Elcan Optical Technologies MRTB640

Testing and inspection of the Elcan Optical Technologies MRTB640 bid samples resulted in no deficiencies for technical performance or system suitability. A review of Elbit's MRTB640 Technical Volume Proposal resulted in no deficiencies for production readiness or ILS. Significant strengths, strengths, significant weaknesses, and weaknesses are outlined below, with all specific ratings and comments provided in Elcan MRTB640' Technical Capability Matrices. The Elcan MRTB640 proposal received and overall rating of Excellent with a risk rating of Moderate as shown in the following table in accordance with reference (a).



Elcan 640	Technical Performance	System Suitability	Production Readiness	ILS	Overall Rating
Technical Assessment	Excellent	Outstanding	Outstanding	Marginal	Excellent
Risk	Moderate	Moderate	Low	Moderate	Moderate

## 3. Technical Conclusion/Recommendation

(b) (4)

## B. Past Performance Evaluation (Factor 2)

Past performance data was collected, analyzed, and evaluated using the Guide to Past Performance Version 3 as the reference. In addition, PM ONS approved questionnaires were sent to points of contact provided by offerors as well as to secondary and tertiary points of contact. Each offeror was also researched in the Past Performance Information Retrieval System (PPIRS). The evaluation did not reveal negative past performance information on any offeror. The results of which are captured below in table 1-1.

**Table 1-1 Past Performance Matrix**

OFFEROR	PPIRS	QUESTIONAIRES EVALUATION	OVERALL RATING
NVS	(b) (4)		Exceptional
FLIR			Very Good
ELBIT			Neutral/unknown
ELCAN 320			Very Good
ELCAN 640			Very Good
AXSYS			Exceptional
OASYS			Exceptional

**C. Price Evaluation/Analysis (Factor 3)****1. Price Analysis Methodology**

As listed in reference (b), prices were evaluated, but not rated. In order to conduct an accurate evaluation of all prices, the Contract Specialist established a notional basket of goods for a complete system (MRTB). A notional basket of goods was used in order to isolate the variables that existed among the offerors proposals. All stepladder prices were evaluated by obtaining their mid point weighted average of each incremental step ladder and then summing the incremental weighted unit prices of the given year to yield a final mid-point weighted average price multiplied by a notional quantity.

**2. Price Evaluation Findings**

Numerous pricing deficiencies were discovered by the SSAC during the price evaluation of each offer. IAW ref (b), the offeror's price proposal shall be evaluated to determine if it is one (1) complete, two (2) consistent, and three (3) reasonable with the offeror's technical approach. Of the seven (7) proposals received, four (4) proposals showed pricing for Contract Line Item Numbers (CLINS) that were solicited as not separately priced (NSP). Five (5) proposals identified the informational listed CLINS as a rollup aggregate price to their respected price sub contract line item of the CLIN.

Three (3) proposals were deemed unbalanced in their CLIN pricing in that they illustrated unreasonable variances in the establishment of the unit price. Four (4) proposals failed to provide CLIN pricing yet listed them as NSP. All seven (7) proposals received for CLIN 0001 (MRTB) were IAW ref (b) and did allow for a competitive range to be determined.

Except for the prices of a complete MRTB system (CLIN 0001), the Contracting Officer was unable to make a price reasonableness determination of the remaining solicited CLINS. The incomplete and unbalanced pricing submitted by multiple offerors prevented the contract specialist from conducting an accurate price comparison. Nevertheless, price comparisons were done for all priced CLINS/SCLINS. The contract specialist believes that discussions would provide the Government with a better understanding of the priced proposals. Though FAR 15.306(b)(3)(i) allows for the Government to communicate with offerors on areas such as ambiguities in the proposal or other concerns (e.g., perceived deficiencies, weaknesses, errors, omissions, or mistakes), it does not allow for the offerors to submit revised proposals prior to a competitive range determination.

Table 1-2 below captures a summary of the above findings to areas that would require communications with offerors, which ultimately would require revised proposals to be submitted.

**Table 1-2 Price Evaluation Summary**

<b>OFFEROR</b>	<b>Priced NSP CLINS</b>	<b>Priced Info CLINS</b>	<b>Price Found Unbalanced</b>	<b>Failed to Price but listed as NSP</b>
<b>NVS</b>	<b>(b) (4)</b>			
<b>FLIR</b>				
<b>ELBIT</b>				
<b>ELCAN 320</b>				
<b>ELCAN 640</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
<b>AXSYS</b>	<b>(b) (4)</b>			
<b>OASYS</b>				

3. Table 1-3 below captures the individual unit price for each CLIN.

**Table 1-3 Individual CLIN Prices**

CLIN #	CLIN Description	NVS	FLIR	ELBIT	ELCAN 320	ELCAN 640	AXSYS	OASYS
0001	MRTB	(b) (4)						
0002	VERIFICATION & DEMONSTRATION							
0002AA	SUPPORTABILITY DEMONSTRATION							
0002AB	ASSESSMENT OF INITIAL PRODUCT							
0002AC	PRODUCTION ACCEPTANCE (PAT)							
0003	CLS							
0004	CONTRACTOR LOGISTICS SUPPORT (CLS) SETUP							
0005	COMMERCIAL OFF THE SHELF (COTS) MANUAL							
0005AA	MAINTENANCE MANUAL							
0005AB	OPERATORS MANUAL							
0006	MAINTENANCE TRAINING							
0006AA	MAINTENANCE TRAINING (EAST)							
0006AB	MAINTENANCE TRAINING (WEST)							
0007	PARTS LIST							
0008 (NSP)	ISOLATION/CALIBRATION DATA UPLOAD							
0009 (NSP)	CONTRACT DATA REQUIREMENT LIST (CDRL)							
0010	RELIABILITY & MAINTENANCE PROGRAM							

#### 4. MRTB System Price Evaluation

The determination of price reasonableness was arrived, in part, by utilizing the guidance of FAR subpart 15.305 (Proposal Evaluation). Paragraph (a) (1) of the subpart states that competition establishes price reasonableness. Therefore, when contracting on a firm-fixed-price basis, comparison of the proposed prices will usually satisfy the requirement to perform a price analysis, and a cost analysis need not be performed.

Table 1-4, outlined below, provides a breakdown of the price comparison used in the analysis of CLIN 0001 Complete MRTB system. All prices submitted for CLIN 0001 were found to be in accordance with the requirements of reference (b). In establishing the basket of goods pricing for CLIN 0001, the contract specialist used a notional quantity of 4,000 systems for year one and 1,000 systems for years two through five.

With the knowledge gained from the SSEB findings, the Contracting Officer determined that CLIN 0001 prices offered by ELCAN 640 were fair and reasonable in part because their system was the only one found technically acceptable. In addition, market research shows that ELCAN currently has their proposed ELCAN 320 system on GSA priced at \$16,140.00. Their technically acceptable offer known as ELCAN 640 is being proposed to the Government for \$16,748.55, an increase of only 3% for a superior product.

**Table 1-4 MRTB System Price Analysis**

MRTB 5 Year System (CLIN 0001) Basket Pricing						
Company	Year 1	Year 2	Year 3	Year 4	Year 5	Total
NVS	(b) (4)					(b) (4)
FLIR						
ELBIT						
ELCAN 320						
ELCAN 640						
AXSYS						
OASYS						(b) (4)
						\$136,091,030.00

#### 5. MRTB Price Analysis for supporting CLINS

The Contracting Officer as part of the SSAC could not make a fair and reasonable determination of any item outside of CLIN 0001. The Contracting Officer charged this to the numerous pricing deficiencies discovered by the SSAC during price evaluations. As noted in table 1-2 on proceeding pages, all price proposals contained inconsistencies which hindered the Contracting Officer from conducting a complete analysis of all CLINS except CLIN 0001. However, it is the Contracting Officer's intent to discuss all pricing discrepancies with the offeror remaining in the competitive range. While price is a factor for award, it was not the deciding factor for establishment of the competitive range. The competitive range was established by selecting the offeror whose technical proposal was determined susceptible to being made acceptable.

**SECTION VII – DECISION TO PROCEED****A. Basis for Recommendation**

The recommended course of action, based on the information set forth in the business clearance, is to establish a competitive range of one. Despite Elcan 640 reflecting no technical deficiencies, the findings in ELCAN 640's business volume do not allow the SSAC to support an immediate award decision. The SSAC cannot accurately make a fair and reasonable determination on all of ELCAN 640's prices without holding discussions. The SSAC is confident that the unbalanced and incomplete pricing issues found within ELCAN 640's proposal are easily correctable with discussions.

**B. Competitive Range of One**

Cibinic, Nash, and O'brien (1999) have stated that "an agency's decision to include only one offeror in the competitive range will always be subject to close scrutiny". In fact, the Comptroller General has overturned an agency's decision to do so in a number of cases. Some of the reasons why these decisions were overturned include: if there is an opportunity for significant cost savings; close question of acceptability; inadequacies of the solicitation contributed to the technical deficiency; the informational deficiency could be reasonably corrected by relatively limited discussions.

The findings outlined in this business clearance memorandum do not show evidence of the applicability of any of the above conditions to this source selection decision. Once ELCAN 640's severely inflated prices are corrected, there would not be any significant cost savings to the Government to include any other offeror. The fact still remains that all but one proposal met the requirements called out in the RFP. Both the SSAC and SSEB are in agreement that ELCAN 640's proposal is the only technically acceptable offer. The only issue preventing an award without discussions is the findings on their business volume proposal. However, that the SSAC believes can this issue can be easily corrected with discussions.

Although proposals with significant offer deficiencies may be included in the competitive range, they may also be excluded if the contracting officer determines that the offeror does not stand a reasonable chance of winning the competition. Thus, it is proper to exclude from the competitive range a proposal that could be made acceptable only if major modifications or revisions were undertaken. The information set forth in this document present clear evidence that none of the technically deficient proposals are susceptible to being made acceptable without major modifications, which in turn would result in significant risk in terms of cost, schedule, and performance, to the Government.

For purposes of efficiency, the Government should establish a competitive range with the proposal that was rated with no technical deficiencies (Factor 1), was given the best adjectival and risk ratings by the SSEB, and allow for discussions and submittal of Final Proposal Revision.

## C. Discussion items

## 1. Business Proposal

ELCAN 640's business volume contained the following issues that would be addressed during discussions:

- i. Elcan 640's response to CLIN 0002 (Verification & Demonstration) includes pricing. CLIN 0002 is intended to serve as an informational CLIN with priced SCLINS.
- ii. Elcan 640 did not provide a price for SCLIN 0002AC (Production Acceptance).
- iii. Elcan 640's price for CLIN 0004 (CLS Set-up) is not consistent with the level of effort associated with the price of the CLIN. Price reasonableness determination is not possible without discussions with the offeror.
- iv. Elcan 640's response to CLIN 0005 (COTS Manuals) includes a one-lot price scheme, which did not provide for individual unit prices.
- v. Elcan 640's response to CLIN 0006 (Maintenance Training) includes pricing. CLIN 0006 is intended to serve as an informational CLIN with priced SCLINS. Both SCLINS were appropriately priced, however. It is assumed that the offeror used CLIN 0006 as a means to sum up the total of both SCLINS.
- vi. Elcan 640's prices for SCLIN 0006AA (East Coast training) and 0006AB (West coast training) are inconsistent with the level of effort associated with the price of the SCLINS.
- vii. Elcan 640's response to CLINS 0008 (Iso/Calibration data) and 0009 (CDRLS) includes pricing. Both CLINS were identified by the Government as being Not Separately Priced (NSP).

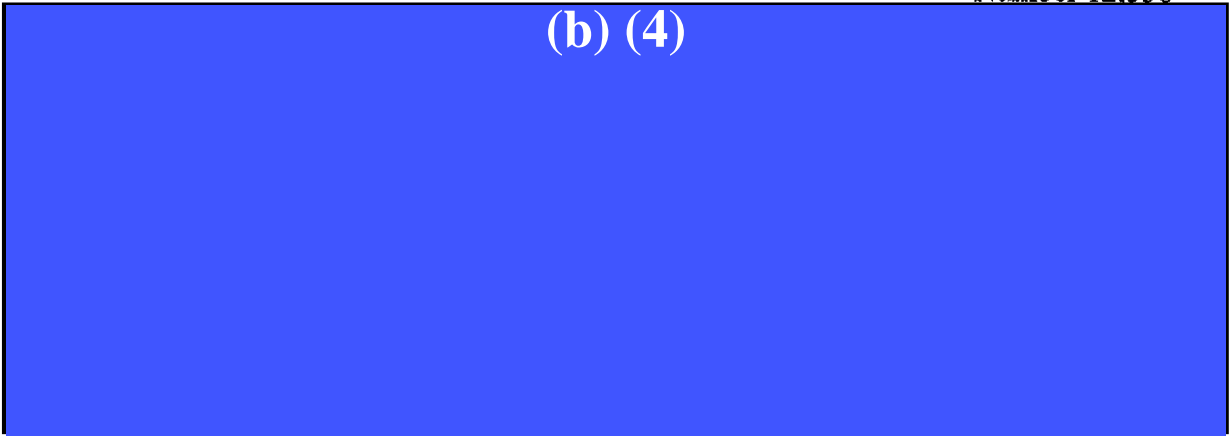
## 2. Technical Proposal

Despite the fact that ELCAN 640's proposal was found technically acceptable, the Government will use the recommended discussion session to address the following issues:

## a. Technical Performance

(b) (4)

(b) (4)



b. Integrated Logistics Support (ILS)

(b) (4)





(b) (4)



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**SOURCE SELECTION INFORMATION – SEE FAR 2.101 and 3.104**



(b) (4)

D. Pre-Negotiation Findings Conclusion

The Contracting Officer considered whether subsequent discussions could make Vendors A, B, C, D, E, and F susceptible to being made acceptable, but determined it unlikely due to their technical deficiencies. Not having any technical deficiencies has kept Vendor G (Elcan 640) as the lone member of the competitive range. Based on the information contained herein and upon the review and approval of this BCM by the Assistant Commander for Contracts, letters will be sent to the six (6) offerors not included in the competitive range notifying them of their unsuccessful proposals. Shortly thereafter, discussion will formally begin with the one (1) offeror in the competitive range.

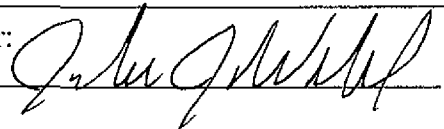
**SECTION I – COVER AND SIGNATURE PAGES**

Type of Procurement Action: <input type="checkbox"/> Sealed Bidding <input checked="" type="checkbox"/> Full and Open Competition <input type="checkbox"/> Negotiated Under 10 U.S.C. 2304(b)( ) <input type="checkbox"/> Negotiated Under 10 U.S.C. 2304(c)( ) <input type="checkbox"/> Negotiated Under 40 U.S.C. 541 Brooks Act <input type="checkbox"/> Negotiated Pursuant to Changes Clause <input type="checkbox"/> Claim Settlement <input type="checkbox"/> Definitization of Letter Contract <input type="checkbox"/> Final Price (Incentive, Redeterminable, or EPA)		Type of Clearance: <input type="checkbox"/> Pre-Negotiation <input checked="" type="checkbox"/> Post Negotiation <input type="checkbox"/> Letter Contract																																																	
Solicitation: M67854-08-R-1076 /Contract Number: M67854-09-D-1017 Activity: MCSC PG-13 IWS, PM ONS																																																			
Contractor(s): Elcan Optical Technologies  Name: ELCAN Optical Technologies City/State: 1601 N. Plano Road, Richardson, TX 75081-1913																																																			
Program: PM ONS  Description of Supplies/Services: Medium Range Thermal Bi-Ocular capable of providing an individual thermal imaging capability to the Marine Rifle Squad, Machine Gun Squad, and other Marine Corps units, engaging in offensive and defensive operations.																																																			
<table border="1"> <thead> <tr> <th>Pricing Structure:</th> <th>Proposal</th> <th>Pre-Negotiation</th> <th>Post-Negotiation</th> </tr> </thead> <tbody> <tr> <td>Cost (Excluding COM)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Cost of Money</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total Cost</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fee/Profit ( %)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Base Fee ( %)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Award Fee ( %)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td></td> <td>\$170,932,045.52*</td> </tr> <tr> <td>Ceiling Price</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sharing Arrangement:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Clearance Total:</td> <td colspan="3"><b>\$180,000,000.00 NTE ceiling FFP ID/IQ contract</b></td> </tr> <tr> <td colspan="4">*Total post-negotiation price is based on the sum of all baskets of goods.</td> </tr> </tbody> </table>				Pricing Structure:	Proposal	Pre-Negotiation	Post-Negotiation	Cost (Excluding COM)				Cost of Money				Total Cost				Fee/Profit ( %)				Base Fee ( %)				Award Fee ( %)				Total			\$170,932,045.52*	Ceiling Price				Sharing Arrangement:				Clearance Total:	<b>\$180,000,000.00 NTE ceiling FFP ID/IQ contract</b>			*Total post-negotiation price is based on the sum of all baskets of goods.			
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Performance Period: Start: Date of award              Finish: Five (5) years after award																																																			
Prepared By: Name: Eddie Tavares Title: Contract Specialist Phone: 703-432-3632 Date: 30 Dec 08																																																			

## Recommendation:

Based on the information contained herein, this action is recommended for award and the associated costs/prices have been determined to be fair and reasonable based on the analysis of the available financial data combined with the technical program findings/direction and the business environment in which we find ourselves today.

## Contracting Officer:

Signature: 


John Wahl

Contracting Officer, PMONS

Phone: 703 432 3568

Date: 1-8-09

## Legal Counsel:

Signature: 

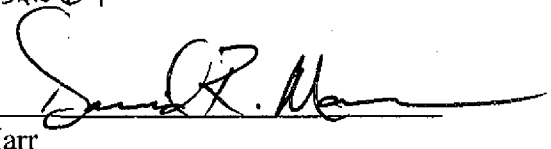
Major Kyle Murray

Office of Counsel

Phone: 703-432-3885

Date: 08 JAN 09

## Reviewer:

Signature: 

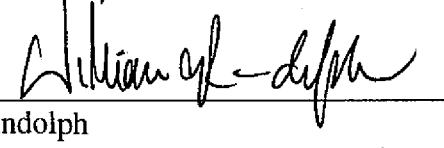
David R. Marr

Lead Contracting Officer, (CT-021) PG 13, IWS

Phone: 703-432-3724

Date: 1-12-09

## Approval:

Signature: 

William Randolph

Assistant Commander for Contracts (CT 02)

Phone: 703-432-3947

Date: 15 JAN 09

Unconditional Approval ☒Not Approved ☐Conditional Approval ☐

Conditions (If applicable):

**SECTION IX – PRE-AWARD COMPLIANCES**

Check if N/A	DOCUMENT/APPROVAL CHECKLIST	DATE
	Review of Online Representations & Certifications Application (FAR 4.1201(c))	12 December 08
	Determination of Responsibility (FAR 9.103) and financial stability (FAR 9.104-1(a)).	7 January 08
√	HCA Waiver of Cost or Pricing Data (FAR 15.403-1)	
√	Certificate of Current Cost or Pricing Data (FAR 15.406-2)	
√	Approved Make or Buy Plan (FAR 15.407-2)	
√	Contractor's Estimating System determined acceptable by ACO (DFARS 215.407-5)	
√	Pre-Award Disclosure Statement – Cost Accounting Practices and Certification (FAR 15.408)	
√	Contractor's Accounting System determined adequate by CAO/DCAA (FAR 16.301-3)	
√	Determination to make single award for IDIQ Advisory and Assistance Services over 3 years and \$11.5M (FAR 16.504(c)(2)(A) or (B))	
	Subcontracting Plan determined adequate (FAR 19.705-4)	29 September 08
√	Approval of SDB subcontracting goal less than 5% (DFARS 219.705-4)	
	EEO compliance requested/obtained (FAR 22.805).	12 December 08
√	Disclosure Statement determined current, accurate and complete by ACO (FAR 42.302(a)(11)).	
√	Contractor EVMS verified compliant with DoD criteria by DCMA (DFARS 242.302(S-71)).	
√	Contractor Purchasing System determined to be approved by the ACO (FAR 44.304)	
√	Property System reviewed for acceptability by ACO (FAR 45.105).	
√	Facilities determination and findings (DFARS 245.302-1).	
√	Compliance with DoD Instruction 7640.2 as supplemented by SECNAV Instruction 4330.16.	

**SECTION X – POST-NEGOTIATION**

## 12 Summary of Key Documents:

Reference	Title	Date
a	MRTB Source Selection Plan, Rev 3 (Attached)	4 December 2008
b	RFP M67854-08-R-1076 w/ five (5) amendments (Attached)	28 April 2008
c	Source Selection Evaluation Board (SSEB) Initial Technical Evaluation Report (ITER) (Attached)	24 September 2008
d	Single Award Determination and Findings (Attached)	2 November 2008
e	Acquisition Strategy/Acquisition Plan (AS/AP) (Attached)	20 October 2008
f	Pre-Negotiation Business Clearance Memorandum	6 November 2008

Enclosure	Title	Date
1	SSAC Recommendation for competitive range	20 October 2008
2	Establishment of the competitive range	28 October 2008
3	Notice of inclusion in the competitive range	12 November 2008
4	First Request for Final Proposal Revision	20 November 2008
5	Notice of continued inclusion in the competitive range with attached minutes from teleconference	12 December 2008
6	Second Request for Final Proposal Revision	17 December 2008
7	ACAT IV (M) Designation	17 November 2008
8	Final Technical Evaluation Report (FTER)	8 January 2009
9	SSAC Recommendation for award	8 January 2009
10	Source Selection Decision Memorandum	12 January 2009
11.	SSA brief (Slides)	12 January 2009

**B. Pre-Negotiation BCM Summary**

On 06 Nov 2008 Pre-Negotiation Business Clearance Memorandum (BCM) 12,538.1 was approved by the Assistant Commander for Contracts (CT-021). The signed Pre-Negotiation BCM affirmed the Source Selection Authority's (SSA) establishment of a competitive range of one with Elcan Optical Technologies (Elcan 640). Subsequently, notices were sent to each of the six offerors excluded from the competitive range.

**C. Discussions**

On 12 Nov 2008, a notice of inclusion into the competitive range was sent to Elcan 640. The notice officially opened discussions between the Government and Elcan 640. Included in the notice was a summary of all the Significant Weaknesses, Weaknesses, and pricing issues found within Elcan 640's proposal (see enclosure 3).

On 20 Nov 2008 the Government informed Elcan 640 of the fact that discussions had come to a close and requested a Final Proposal Revision (FPR). Elcan promptly responded to the

Government's request and submitted their FPR on 24 Nov 08. A review of Elcan 640's FPR revealed they adequately addressed all Significant Weaknesses and most of the Weaknesses outlined in enclosure four (4). However, they failed to adequately address the Government's questions regarding their pricing information. Upon review of Elcan's business proposal it was discovered that the prices they provided for CLINS 0004 (CLS set-up) and CLIN 0005 (Manuals) remained unusually high in accordance with the level of effort associated with each CLIN. These remaining issues would not allow for a fair and reasonable determination and therefore lead to a second round of discussions with Elcan 640.

On 12 Dec 2008, the Government informed Elcan 640 of their continued inclusion into the competitive range and the need for a second round of discussions (see enclosure 5). On the same day, a 50-minute teleconference was held to allow the Government to gain a better appreciation for Elcan 640's level of understanding of the remaining pricing concerns and one of the technical weaknesses within their proposal. At the end of the teleconference the Government concluded that both parties reached a mutual understanding of what was being asked of Elcan to provide. On 17 Dec 2008, the Government informed Elcan 640 that discussions had officially ended and requested a FPR be provided based on the discussions outlined in enclosure five (5). On 23 Dec 08, Elcan responded to the Government's request and provided their FPR. A summary of the evaluations of Elcan 640's FPR is outlined below.

#### D. Evaluation of Final Proposal Revisions

##### 1. Technical Evaluations

###### a. Initial FPR evaluation

The Source Selection Evaluation Board (SSEB) met on 25 Nov 2008 to review Elcan 640's initial FPR. The Offeror addressed all of the 18 weaknesses and six significant weaknesses expressed in the first FPR. After a thorough analysis by members of the SSEB, the Offeror's FPR was found to have at total of four weaknesses, no significant weaknesses, and no deficiencies. Additionally, the offeror was able to upgrade a significant weakness to a strength via their FPR response. The results of the evaluation denote an increase in the offeror's overall rating from Excellent to Outstanding.

###### b. Final FPR evaluation

On 29 Dec 08, the SSEB met again to review the second request for FPR. After a thorough analysis by members of the SSEB, Elcan 640's second FPR was found to have a total of three weaknesses, no significant weaknesses, and no deficiencies. It is important to note that the SSEB was satisfied with Elcan 640's technical proposal after the initial FPR evaluation. However, it was deemed beneficial to discuss one of the remaining weaknesses with Elcan since the Government was already in the process of conducting a second round of discussions due to pricing issues remaining in Elcan 640's business proposal. The end result proved to be

beneficial to the Government as Elcan 640 was able to reduce their remaining weaknesses down from four to three.

The two tables outlined below represent Elcan 640's technical assessment and risk ratings before and after discussion were held.

#### Pre-negotiation Evaluation Matrix

Elcan 640	Technical Performance	System Suitability	Production Readiness	ILS	Overall Rating
Technical Assessment	Excellent	Outstanding	Outstanding	Marginal	Excellent
Risk	Moderate	Moderate	Low	Moderate	Moderate

#### Post-negotiation Evaluation Matrix

Elcan 640	Technical Performance	System Suitability	Production Readiness	ILS	Overall Rating
Technical Assessment	Outstanding	Outstanding	Outstanding	Excellent	Outstanding
Risk	Moderate	Moderate	Low	Moderate	Moderate

#### 2. Past Performance Evaluation

The overall Past Performance assessment for Elcan 640 remained unchanged at a rating of Excellent. There were no issues concerning past performance addressed at any time during discussions.

#### 3. Price Analysis

The determination of price reasonableness was arrived, in part, by utilizing the guidance of FAR subpart 15.404-1 (Proposal Analysis). Paragraph (b)(2)(i) of the subpart states that the Government may use various price analysis techniques and procedures to ensure a fair and reasonable price. One such technique is a comparison of proposed prices received in response to the solicitation. Normally, adequate price competition establishes price reasonableness.

As listed in reference (b), prices were evaluated, but not rated. In order to conduct an accurate evaluation of all prices, the Contract Specialist established a notional basket of goods for a complete system (MRTB), CLS, and one for all supporting CLINS. A total of three baskets of goods were used to evaluate price. All stepladder prices were evaluated by obtaining the mid point weighted average of each incremental step ladder and then summing the incremental weighted unit prices of the given year to yield a final mid-point weighted average price multiplied by a notional quantity.



## a. MRTB System Price Analysis

Market research showed that Elcan 640 currently has their proposed Elcan 320, also known as the Phantom IR, system on GSA priced at \$18,000.00. Their technically acceptable offer known as the MRTB 640 is being proposed to the Government at a mid-point weighted average of \$16,748.55, which is 7% lower than that of the less technically-capable product listed on GSA. Market research also identified the same Phantom IR system on a vendor's website as an "open-market" price of \$21,500.00, which is 22% higher than that of Elcan 640's proposed MRTB 640. In addition, the volume discount for the Government's anticipated purchase of over 4000 systems is \$14,127 per system, which represents additional savings as much as 34% when compared to the price of \$21,500.00 for a less technically-capable product.

Elcan 640's system prices were also compared to those prices of the original six offerors eliminated from the competitive range. Elcan 640 was never informed about the fact that they were the only offeror remaining in the competitive range, thus maintaining a competitive environment that allowed for price comparison. The burden of proof for non-defective pricing information rests on the Contracting Officer's belief that the offeror provided accurate pricing. Coupling the above information with the fact that the proposed MRTB 640 from Elcan was the only technically acceptable offer that satisfies the Government's requirement within a competitive environment, the Contracting Officer determined that Elcan 640's prices for their MRTB system were fair and reasonable.

Table 1-1(a) represents the mid-point weighted average price of the MRTB system multiplied by a notional quantity of 4000 systems for year one and 1000 systems for years two through five.

Table 1-1(a)

MRTB 5 Year System (CLIN 0001) Basket Pricing						
Company	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Elcan 640	(b) (4)					

Of the six offerors eliminated from the competitive range, table 1-1(b) represents the mid-point weighted average price of the MRTB system multiplied by a notional quantity of 4000 systems for year one and 1000 systems for years two through five.

Table 1-1(b)

MRTB 5 Year System (CLIN 0001) Basket Pricing						
Company	Year 1	Year 2	Year 3	Year 4	Year 5	Total
NVS	(b) (4)					
FLIR						
ELBIT						
ELCAN 320						
AXSYS						
OASYS						

## b. CLS Price Analysis

Elcan 640's technical evaluation for Contractor Logistical Support (CLS) revealed that their proposal contained only two weaknesses under CLS. A comparison revealed that Elcan 640's CLS pricing was 44% higher than that of the lowest priced CLS proposal and 33% lower than the highest priced CLS proposal within the original proposals received. Unlike that of the lowest priced CLS proposal, Elcan 640's technical rating for CLS provided neither Deficiencies nor Significant Weaknesses. Elcan 640's CLS approach was the highest rated and the fourth lowest priced out of the seven proposals. Therefore, the Contracting Officer was able to determine that Elcan 640's prices for CLS, submitted in a full and open competitive environment, were fair and reasonable.

Table 1-2 represents the cost of CLS repairs being conducted on 10% of the systems purchased for a given year. A notional quantity of 4000 systems for year one and 1000 systems for years two through five was assumed when determining the number of repaired systems per year. In addition, CLS start up costs (CLIN 0004) were added to year one.

Table 1-2

MRTB 5 Year CLS (CLIN 0003 & 0004) Basket Pricing						
Company	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Elcan 640	(b) (4)					

## c. Supporting CLINS Price Analysis

Supporting CLINS include those CLINS that are not required to be purchased in order to obtain the MRTB system, but play an important role in the support and maintainability of the system. As stated above, a basket of goods was established to allow for an accurate comparison of these CLINS amongst all seven proposals received. The analysis showed that Elcan 640's prices for supporting CLINS were the fifth highest when compared to the prices of the other five vendors who submitted complete priced for all supporting CLINS.

Table 1-3 represents the basket of goods for all supporting CLINS. It is important to note that CLINS 0002 (Verification & Demonstration) and 0010 (Reliability & Maintenance Program) are to be purchased during the first delivery order and would not be procured for the remainder of the life of the contract. Notional quantities for all supporting CLINS were based on the following: CLINS 0002, 0010 were one each for year one and zero for all remaining years; CLINS 0005 (Manuals) was one each for all five years; and CLIN 0006 (Training) was six each for year one through five.

Table 1-3

MRTB 5 Year supporting CLINS (0002, 0005, 0006, & 0010) Basket Pricing						
Company	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Elcan 640	(b) (4)					

Table 1-4(a) represents the total prices of all combined baskets of goods from all vendors as originally proposed.

**Table 1-4(a)**

MRTB 5 Year Total Cost (ALL CLINS) Basket Pricing						
Company	Year 1	Year 2	Year 3	Year 4	Year 5	Total
NVS	(b) (4)					
FLIR						
ELBIT						
ELCAN 320						
ELCAN 640						
AXSYS						
OASYS						\$183,602,423.52

After discussions had ended, table 1-4(b) represents the total prices of all of Elcan 640's combined baskets of goods. It is important to note that all totals, listed of each table, represent the closest quantities estimated to be purchased by the Government over the life of the contract.

**Table 1-4(b)**

MRTB 5 Year Total Cost (ALL CLINS) Basket Pricing						
Company	Year 1	Year 2	Year 3	Year 4	Year 5	Total
ELCAN 640	(b) (4)					
						\$170,932,045.52

## BUSINESS CLEARANCE MEMORANDUM

Number 12,538.1

Table 1-5 below provides a snapshot of where all the prices were prior to discussions/negotiations to when discussions/negotiations with Elcan 640 concluded. Table 1-5 also shows how discussions/negotiations with Elcan 640 reduced their individual unit prices by a total of \$4,355,219.00 from their original proposal. The new calculated "basket of goods" price for Elcan 640 is \$170,932,045.52.

**Table 1-5 Individual CLIN Prices**

CLIN #	CLIN Description	Pre-Neg	Post-Neg	Delta	% Delta
0001	MRTB	(b) (4)			
0002	VERIFICATION & DEMONSTRATION				
0002AA	SUPPORTABILITY DEMONSTRATION				
0002AB	ASSESSMENT OF INITIAL PRODUCT				
0002AC	PRODUCTION ACCEPTANCE (PAT)				
0003	CLS				
0004	CONTRACTOR LOGISTICS SUPPORT (CLS) SETUP				
0005	COMMERCIAL OFF THE SHELF (COTS) MANUAL				
0005AA	MAINTENANCE MANUAL				
0005AB	OPERATORS MANUAL				
0006	MAINTENANCE TRAINING				
0006AA	MAINTENANCE TRAINING (EAST)				
0006AB	MAINTENANCE TRAINING (WEST)				
0007	PARTS LIST (Price represents basket of parts)				
0008 (NSP)	ISOLATION/CALIBRATION DATA UPLOAD				
0009 (NSP)	CONTRACT DATA REQUIREMENT LIST (CDRL)				
0010	RELIABILITY & MAINTENANCE PROGRAM				
Total of value change of all CLINS				(\$4,355,219.00)	

SOURCE SELECTION INFORMATION – SEE FAR 2.101 and 3.104

## E. Best Value Determination

The findings of Elcan's technical proposal in enclosure eight (FTER) have shown Elcan's proposed MRTB 640 system as the only one to have met the requirements outlined in reference (b). In addition, the Contracting Officer's evaluation of Elcan 640's business proposal resulted in a determination of Elcan's prices to be found fair and reasonable. Subsequently, the findings listed above identify Elcan 640's proposal as representing the best value to the Government.

(b) (4)

## Technical Performance

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
<b>3.3.1.15 Interpupillary Adjustment.</b>		<b>5.7.4</b>	
59mm or narrower to 71mm or wider	Threshold	Interpupillary adjustment capability not provided (I-EOTF)	High
<b>3.3.1.20 Start-up Time.</b>		<b>5.6.4</b>	
15 seconds	5 seconds	08C01: 15.6 ± 0.5 s. (T-EOTF)	Moderate
		08C02: 15.6 ± 0.5 s. (T-EOTF)	
<b>3.3.1.21.2 Battery Life.</b>		<b>5.6.5</b>	
4 hours @ 32 degrees F	8 hours @ 32 degrees F	08C01: 3 hrs and 46 minutes @ 32 degrees F. (T-E- Labs c/o EOTF)	High
<b>3.3.1.24 Harness.</b>		<b>5.2.20</b>	
Has a PALS harness	Threshold	Technical Volume claims coyote brown harness to be supplied, but none observed in packaging. Has black neck strap with no quick release feature. (I-EOTF)	Low
<b>3.3.1.34 Carrying Case.</b>		<b>5.2.23</b>	
Includes PALS soft carrying case	Threshold	PALS-compatible soft carrying case provided that can accommodate the imager, quick reference card, operator's manual, two sets of spare batteries, lens caps, eye cups, and cleaning materials. Is Olive Drab Green, not the required Desert Coyote 486/498. (I-EOTF)	Low
<b>Significant Strengths</b>			
<b>3.3.1.6.4 Laser System-On Notification.</b>		<b>5.2.4</b>	
Laser operation indicator	Laser operation and mode indicator	Has laser operation indicators. When laser is armed, text message in FOV indicates the operation mode. Text message also indicates when the laser is fired. (D-EOTF)	Low
<b>3.3.1.18 Mil-Std 1913 Rail.</b>		<b>5.2.14</b>	
N/A	Has a rail	Has Mil-Std-1913 rail integrated with the top surface (solid form). (I-EOTF)	Low



**(b) (4) Technical Performance**

3.3.1.21.1 Battery Type.		5.2.16	Low
In Marine Corps inventory	AA or CR123 rechargeable and non-rechargeable	Has a battery cell holder that is capable of holding 8 CR123 cells. Both chargeable and non-rechargeable batteries supplied by vendor. Non-rechargeable batteries used for all testing. (I-EOTF)	
3.3.1.25.1 Adjustability Range.		5.7.5	Low
Adjustable for viewing in bright sunshine to total darkness	Range from no less than 0.1 foot-Lamberts to at least 23	08C01: 0.04 ± 0.02 fL to 100 ± 10 fL (95% CL). (T-EOTF)	
		08C02: 0.03 ± 0.01 fL to 200 ± 10 fL (95% CL). (T-EOTF)	
3.3.1.14 Diopter Adjustment.		5.2.8 & 5.7.3	Moderate
From -2 to +2	From -6 to +2	Has diopter adjustment on each eyepiece. (I-EOTF) Diopter values not measured by the EOTF.	
Strengths			
3.3.1.1 Weight. (KPP)		5.2.1	Low
3.75 Lbs	2.5 Lbs	3.68 ±0.02 Lbs ( T-EOTF)	
3.3.1.3 Target Recognition. (KPP)		5.3.3	Low
1100 meters	2200 meters	1300 meters (ASEF c/o EOTF)	
3.3.1.10 Magnetic Compass.		5.2.7	Low
N/A	Has a magnetic compass	Has a magnetic compass. (D-EOTF)	
3.3.1.13 Field of View.		5.7.2	Low
At least 8 degrees in wide FOV	25 degrees	08C01: 9.0° ± 0.5°. (T-EOTF)	
		08C02: 9.2° ± 0.5°. (T-EOTF)	
Significant Weaknesses			
None			

**(b) (4)****Technical Performance**

<b>Weaknesses</b>			
<b>3.3.1.6.1 Laser Pointer.</b>		<b>5.2.4</b>	<b>Moderate</b>
IR laser pointer with training and operational modes	Threshold	IR laser pointer with training and operational modes. <b>Note- the default mode is the operational mode. Two additional button pushes are required to get to training mode. No blue blocker-type mechanism. (D-EOTF)</b>	
<b>3.3.1.6.3 Laser Activation.</b>		<b>5.2.4</b>	<b>High</b>
Momentary on switch	Threshold	Laser is fired via independent momentary on switch on back of UUT, once laser is armed from the main menu. Caution- The laser fire button acts as a calibration execution if laser is not armed. (D-EOTF)	
<b>3.3.1.16.1 System Adjustments.</b>		<b>5.2.10</b>	<b>High</b>
Polarity, brightness, and contrast directly accessible from level one of a menu system	... by individual and independent controls	This system has two menus, Main and Advanced, accessible through individual buttons. <b>Elements of each menu are displayed one at a time, so the user can not immediately see what comprises each menu.</b> For brightness, system has both display brightness and detector level adjustments. Display brightness is accessed in Level 1 of the Advanced menu and adjustable with two buttons. Gain and Level adjustments require disabling the AGC which is accessible in Level 1 of the Main Menu. Disabling the AGC changes the layout of Main Menu Level 1. Polarity is accessible from Level 1 of Main Menu, then adjustable by two buttons. (D-EOTF)	
<b>3.3.1.16.3 System Calibration.</b>		<b>5.2.12</b>	<b>High</b>
Manual calibration directly or from level one of a menu	Threshold	Can be manually calibrated directly with individual button. Button is multimodal. Button also serves a laser fire button- <b>a potential safety hazard. (D-EOTF)</b>	
<b>3.3.1.32.2 Objective Lens Protection.</b>		<b>5.2.22</b>	<b>High</b>
Retained protective objective lens cover	Threshold	Has retained thermally opaque objective lens cover. Lens cover can be replaced without tools, <b>but retention mechanism does not look robust. Cover is designed with o-ring that easily falls out of place. Without the o-ring, the cap will not remain properly located for lens protection. Lens cover can easily contact lens. (I-EOTF)</b>	



(b) (4)

## System Suitability

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
Deficiencies			
3.5.4.7 Altitude		5.4.6	High
Operate up to 15000 ft, storage up to 35,000 ft	Threshold	Storage Test (35,000 ft): 08C03 would not boot up for functional check after test. Unit has not recovered. (T-E-Labs c/o EOTF)	
		Operational Test (15,000 ft): 08C01 functioned properly at low pressure and at ambient pressure after the test. No external damage observed. Note- Unit not subjected to temperature and storage altitude tests. (T-E-Labs c/o EOTF)	
Significant Strengths			
3.3.1.27 Resistance to Decontamination Chemicals.			Moderate
N/A	Resistant to standard decontamination chemicals	Not evaluated by EOTF	
3.5.4.3 Temperature Range.		5.4.2	Moderate
From 0 °F to 120 °F	From -32 °F to 140 °F	08C03: Remained fully functional during and after test, and showed no external damage as a result of the temperature range. (T-E-Labs c/o EOTF)	
Strengths			
3.3.1.26 Operation in an NBC Environment.			Moderate
N/A	See description	Not evaluated by EOTF	
3.5.4.2 Immersion.		5.4.9	Moderate
3 feet of seawater for 15 minutes	66 feet of seawater for 2 hours	08C01: No external damage observed and unit remained fully functional after immersion. No evidence observed of water intrusion through I/O cap, nor battery cap. No condensation observed in viewfinder. Note- Unit not subjected to temperature and storage altitude tests. (T-EOTF)	

(b) (4)

## System Suitability

Significant Weaknesses			
None			
Weaknesses			
3.3.1.31 Light Emissions.		LUE, p. 16	Low
No visible light signature to the unaided eye	Threshold	The system exhibited a light detection distance of 8.29 meters.	
3.5.4.1 Drop Shock.		5.4.8	Moderate
1-meter drop onto hard packed earth	2-meter drop onto hard packed earth	08C01: No external damage observed and unit remained functional after 6 drops from 1 meter. Impacts on top side, bottom side, left side, right side, back end (protected eye-pieces), and front end (protected objective lens). However, batteries rattled loose from the cartridge (within the chamber) causing loss of power. Incident was easily corrected by repositioning the batteries. There is a Velcro strap intended to prevent this, but the strap is problematic. Also noticed that the battery lid hinges had become very sticky, but can not isolate source of problem as the drop test. Note- Unit not subjected to temperature and storage altitude tests. (T-EOTF)	

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## Production Readiness

Technical Subject	Rating	Risk	Comment
1. Does the facility have a production line for the MRTB?	Significant Weakness	High	The MRTB system is not in production and the production line is a common area used for existing programs (not MRTB).
2. Does the facility have a production manager for the MRTB?	Weakness	Moderate	Person identified is not currently the production manager for the MRTB.
3. Has the manufacturer developed and approved MRTB drawings, system specifications, processes and other documentation necessary to produce the system? (Approved drawings and information will have either seals or signatures of approval.)	Deficiency (note)	High	Drawings are not finalized as per Vendor response. <b>Contributes to a deficiency for production status as a commercial item.</b>
4. Has the manufacturer developed a bill-of-material (BOM) required for production of the MRTB? Inspect the BOM, quantities and deliveries and determine its adequacy to meet the production schedule and the delivery schedule.	Deficiency (note)	High	BOM is not finalized. <b>Contributes to a deficiency for production status as a commercial item.</b>
5. Has the manufacturer identified any long lead items required for the manufacture of the MRTB?	Acceptable	High	A single long-lead item is not realistic.
6. Discuss the manufacturer's plans to acquire the necessary long-lead items. Do they have any in stock now?	Significant Weakness	High	Long lead item will be acquired from a foreign source, presenting high risk to the Government. Vendor identifies an ambiguous domestic source of supply.



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Production Readiness

7. Assess the manufacturer's materiel on hand to validate the start-up time for production. Is it adequate?	Deficiency (note)	High	No material on hand. 100 complete systems on order from foreign source. This does not validate start-up time for production (see above). <b>Contributes to a deficiency for production status as a commercial item.</b>
8. Does the manufacturer have sufficient personnel on hand to produce the MRTB? What are the plans to ramp up production if a contract is awarded to the manufacturer?	Weakness	Moderate	Do not identify plan other than "will ramp up". How, how many, etc?
9. If the manufacturer waives privities of subcontracts, determine if the manufacturer has agreements with vendors of specialized components such as optical assemblies, thermal detector assemblies, shells and casings. Else, determine how the manufacturer will acquire these components.	Weakness	High	Text provided by the Vendor indicates there are no agreements in place; only the promise to put them there if they win the contract.
10. Examine the manufacturer's quality assurance program. Do they have the necessary programs in place? Who will and how will they conduct required testing?	Acceptable	High	Does not mention ISO certification.

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Technical Subject	Proposal Claim Reference	Risk	Comment
<b>Deficiencies</b>			
3.2.3 Data Management System	3.2.3 Data Management System	High	Does not address any of the requirements described in the SOW.
3.2.3.3.1 Program Manager	p. 30, 3.2.3.3.1	Moderate	Nothing written in proposal section
3.2.3.3.2 Systems Engineer	p.30, 3.2.3.3.2	Moderate	Nothing written in proposal section
3.2.3.3.3 Configuration Manager	p. 30, 3.2.3.3.3	Moderate	Nothing written in proposal section
3.2.3.3.4 Integrated Logistics Support Manager	p.30, 3.2.3.3.4	Moderate	Nothing written in proposal section
3.2.3.3.5 Quality Assurance Manager	p.30, 3.2.3.3.5	Moderate	No information provided about the QA Manager's responsibility
3.2.3.3.6 Training Manager	p. 30, 3.2.3.3.6	Moderate	No information provided about the Training Manager's responsibility
3.3 Government Furnished Property	p.30, 3.3	High	No submission provided for the entire section.
3.4 Meetings, Formal Reviews, Conferences, Audits and Cost Estimation Products	p.30, 3.4	High	No identification of information
3.4.2 Post Award Conference	p. 31, 3.4.2	High	No submission provided
3.4.3 In-Process Review	p. 31, 3.4.3	High	No submission provided
3.4.4 Production Readiness Review	p. 31, 3.4.4	High	No submission provided
3.5.1.1 Procedures and Controls	p. 32, 3.5.1.1	High	No submission provided
3.6 Producibility	p. 39, 3.6	High	No submission provided
3.7.2.1 Laser Support			Not included.
3.8 Configuration Management	p. 40, 3.8	High	The entire CM section, including all sub-paragraphs, is not included.
3.8.1 Configuration Identification	p. 40, 3.8.1	High	No identification of information
3.8.1.1 Configuration Status Accounting	p. 40, 3.8.1.1	High	No identification of information
3.8.2 Parts Management Program	p. 40, 3.8.2	High	No identification of information
3.8.3 Baseline Management	p. 40, 3.8.3	High	No identification of information
3.8.4 Configuration Control	p. 40, 3.8.4	High	No identification of information

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<b>3.8.4.1 Engineering Change Proposals</b>	p. 40, 3.8.4.1	High	No identification of information
<b>3.8.4.2 Requests for Deviation</b>	p. 40, 3.8.4.1	High	No identification of information
<b>3.8.4.3 Notification of Changes to Commercial Equipment/Software</b>	p. 40, 3.8.4.3	High	No identification of information
<b>3.9 Item Unique Identification</b>	p. 40, 3.9	High	No submission for the entire section.
<b>3.9.1 MRTB End Item Data Plate Information</b>	p. 41, 3.9.1	High	No identification of information
<b>3.9.2 Sub Assembly Data Plate Information</b>	p. 41, 3.9.2	High	No identification of information
<b>3.10 Diminishing Manufacturing Sources and Material Supply</b>	p. 41, 3.10	High	No submission for the entire section.
<b>3.11.1 Test Plan</b>	p. 41, 3.11.1	Moderate	The entire section is missing in the proposal
<b>3.11.5.1 Supportability Demonstration Plan</b>	p. 42, 3.11.5.1	Moderate	Specific plan details missing in text and in appendix F. The contractor was supposed to provide a Supp Demo Plan with the proposal, not propose to develop it in the first weeks of the contract.
<b>3.12 Integrated Logistics Support</b>	Section Not Listed	High	ILS sections have no information
<b>3.14.1.1 Provisioning Parts List</b>	p. 47, 3.14.1.1	High	No submission
<b>3.14.1.2 DLA Parts Positioning and Integration</b>	p. 47, 3.14.1.2	High	No submission
<b>3.14.2 Engineering Data for Provisioning</b>	p. 47, 3.14.2	High	No submission
<b>3.14.3 Request For Nomenclature</b>	p. 47, 3.14.3	High	No submission
<b>3.14.4 Closeout</b>	p. 47, 3.14.4	High	No submission
<b>3.15 Technical Publications</b>	p. 47, 3.15	High	No submission for entire section.
<b>3.16 Support Equipment</b>	p. 48, 3.16	High	No submission for entire section.
<b>3.17 Training</b>	p. 48, 3.17	High	All but 1 section (introduction) not submitted.
<b>3.18 Packaging Handling Storage and Transportation</b>	p. 49, 3.18	High	No submission for entire section.
<b>Appendix A, MIL-STD-810F Certification</b>	Not Stated	High	Not Covered in App A as stated

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Significant Strengths			
None			
Strengths			
3.2 Program and Data Management	p. 22, 3.2	Low	Detailed explanation of management practice
3.2.3.2 Schedule Planning	p. 29, 3.2.3.2	Low	Identifies method and tools to be used ...well thought out.
3.5 Systems Engineering	p. 31, 3.5	Low	Defined In-House program...proposal identifies programs being used, etc...
3.5.3 Quality Management System	p. 35, 3.5.3		In place company standard that incorporates SOW requirement and more...gains confidence of the customer.
3.5.4 Pre-Planned Product Improvement Program	p. 36, 3.5.4	Low	Has thoroughly identified future PIPs, some in accordance with the Objectives stated in the SOW.
Significant Weaknesses			
3.7.1 Safety Assessment Report	p. 39, 3.7.1	Moderate	SAR does not address all hazards associated with the mrtb namely broken lenses and inadvertant lasing.
3.7.1.1 Lithium Battery Safety Qualification	p. 40, 3.7.1	High	Proposed safety information relies on batteries containing less than 1 gram of lithium. Vendor recommends, and Marines will use, CR123 Lithium Batteries that contain over 1 gram. CR123 were also provided by the Vendor with the bid samples.
3.7.2 Lasers	p. 40, 3.7.2	High	The 3B Laser is accessable to the user, and can be inadvertently engaged in training. The system, as delivered, will likely not receive LSRB approval (no interlock, improper labeling).

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3.11 Testing Verification and Demonstration	p. 41, 3.11	High	According to the MRTD Production Schedule in Appendix D, the first 50 delivered units will be received from Thales as complete systems. This invalidates any of planned Assessment of Initial Contract Production Units or Production Acceptance Test; tested units will not be representative of production.
3.13.3 Sustainment Level Maintenance	p. 46, 3.13.3	High	No plan for any organic sustainment level of maintenance
Appendix B, Training Materials	App B	low	Operator's manual shows the NUC Button, but does not illustrate the fact that it is also the laser firing button. Operator's manual does not show how to operate the system, just what the buttons do. It is noted that the operator must push the NUC Button to fire the laser, but it is not in the illustrations. Also the introduction states that the system uses CR123 Batteries, but in 3.7(SAR) it states that the system will not use lithium batteries. The intro also states that the detector is a 35, pitch microbolometer, but it is actually a 25m. Section 5.1 is very limited as to instruction on cleaning of the system. Training materials lack any text (Word Format), and provide no operator function training needed for user eval. Materials need to cover function of the system, not theory of thermals. As per the SOW, the users are familiar with thermal technology.
Appendix D, Production Schedule	3rd page of Production Schedule	High	Page 3 shows two deliveries of 25 complete systems from Thales
Appendix E, Non-Priced CLS Analysis Format	Spread out	Moderate	Controller Board and Shutter Assembly are listed as BER



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Appendix G, MRTB Safety Assessment Report		High	SAR ONLY SHOWS A HAZARD OF 3B LASERS, DOES NOT HAVE A RISK ASSESSMENT CODE ASSIGNED TO IT, AND THE SYSTEM DOES NOT COMPLY WITH THE OPNAVINST 5100.27A. THE LASER DESIGN REQUIREMENT CHECKLIST HAS NOT BEEN COMPLETED NOR HAS THE MILITARY EXEMPT LASER DESIGNATION REQUEST FORM. IN ADDITION, THE SAR DOES NOT ARTICULATE THE HAZARD ASSOCIATED WITH BROKEN GLASS, THAT IS OUTLINED IN THE OPERATORS MANUAL.
<b>Weaknesses</b>			
3.2.2 Subcontract Management	p. 29, 3.2.2	High	Does not identify how many subcontractors nor how this interaction (frequency, etc...) will take place.
3.5.1 Reliability and Maintainability Program	p. 31, 3.5.1	Moderate	Section addresses SE in general but fails to address reliability analysis and prediction, making R&M data available to the govt, and selection of components/predictions/testing.
3.5.2 Failure Reporting, Analysis, and Corrective Action System	p. 34, 3.5.2	Low	There is no mention of how the PQDR and the FRACAS will be integrated. No mention of quarterly failure reporting to the government, only a generic "as required per contract, or as required per CDRLs"

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## Technical Performance

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
<b>3.3.1.14 Diopter Adjustment.</b>		<b>5.2.8 &amp; 5.7.3</b>	
From -2 to +2	From -6 to +2	Diopter adjustment capability not provided for either eyepiece (I-EOTF)	High
<b>3.3.1.21.2 Battery Life.</b>		<b>5.6.5</b>	
4 hours @ 32 degrees F	8 hours @ 32 degrees F	08D03: 2 hrs and 56 minutes @ 32 degrees F. (T-E- Labs c/o EOTF)	High
<b>Significant Strengths</b>			
<b>3.3.1.20 Start-up Time.</b>		<b>5.6.4</b>	
15 seconds	5 seconds	08D01: 3.8 ± 0.5 s. (T-EOTF)	Low
		08D02: 3.8 ± 0.5 s. (T-EOTF)	
<b>3.3.1.21.1 Battery Type.</b>		<b>5.2.16</b>	
In Marine Corps inventory	AA or CR123 rechargeable and non-rechargeable	Uses a load of 5 CR123 batteries (both primary and rechargeable). Vendor supplied primary (non-rechargeable) batteries that were used for all testing. (I-EOTF)	Low

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## Technical Performance

Strengths			
3.3.1.3 Target Recognition. (KPP)		5.3.3	Low
1100 meters	2200 meters	2000 meters (ASEF c/o EOTF)	
3.3.1.13 Field of View.		5.7.2	Low
At least 8 degrees in wide FOV	25 degrees	08C01: 9.0° ± 0.5°. (T-EOTF)	
		08C02: 8.9° ± 0.5°. (T-EOTF)	
3.3.1.16.1 System Adjustments.		5.2.10	Low
Polarity, brightness, and contrast directly accessible from level one of a menu system	... by individual and independent controls	Polarity, brightness, and contrast are all adjustable with individual buttons; however, some buttons are multimodal and therefore not independent. There is no menu system. (D-EOTF)	
Significant Weaknesses			
3.3.1.6.1 Laser Pointer.		5.2.4	High
IR laser pointer with training and operational modes	Threshold	IR laser pointer with training and operational modes. <b>Note- laser modes selected by rotating beam stop with beam attenuation filter. It is easy to access operational mode accidentally</b> (e.g. by bumping the mode selector). No blue blocker-type mechanism. (D-EOTF)	
3.3.1.6.2 Laser Reticle.		5.2.4 & 5.3.1	High
Laser Pointer Reticle	Threshold	There is a general reticle, not a laser-specific reticle. The laser may be fired with the reticle disabled, providing no indication of laser aim-point. (D-EOTF)	
3.3.1.23 Ease of Use.		LUE, p. 22	High
Easy to use. See definition.	Threshold	0/2 operators found the system easy to operate while wearing Nomex flame-resistant gloves.	
3.3.1.25.2 Display Luminance Balance		5.7.6	Moderate
Eyepieces match each other to within 15%	N/A	08D01: 30 ± 10 % (95% CL); 08D02: 26 ± 10 % (95% CL) (T-EOTF) Neither tested bid sample met threshold. The SSEB determined that, while performance was adversely affect, the systems still provided full functionality (range performance was not affected). Display luminance balance was not noted during LUE.	

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## Technical Performance

Weaknesses			
3.3.1.25.1 Adjustability Range.		5.7.5	
Adjustable for viewing in bright sunshine to total darkness	Range from no less than 0.1 foot-Lamberts to at least 23	08D01: 30 ± 10 fL to 110 ± 20 fL (95% CL). (T-EOTF)	High
		08D02: 0.5 ± 0.1 fL to 90 ± 10 fL (95% CL). (T-EOTF)	
3.3.1.37.1 Image Quality.		5.3.2	
See Description	Threshold	08D01: No perceivable distortion, flicker, or obstructions. Image a little grainy. <b>Very noticeable latency and waviness, even for moderate panning speed.</b> Some very subtle ghost spots distributed throughout left eyepiece FOV. CNR point is between 2.0 and 2.5 cy/mrad. (D&T- EOTF)	Moderate
		08D02: No perceivable distortion, flicker, or obstructions. Image a little grainy. <b>Very noticeable latency and waviness, even for moderate panning speed.</b> Some very subtle ghost spots distributed throughout right eyepiece FOV. CNR point is between 2.0 and 2.5 cy/mrad. (D&T- EOTF)	
		08D03: No perceivable distortion, flicker, or obstructions. Image a little grainy. <b>Very noticeable latency and waviness, even for moderate panning speed.</b> Ghost spots observed in each eyepiece FOV. CNR point is between 2.0 and 2.5 cy/mrad. (D&T- EOTF)	



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## System Suitability

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
Deficiencies			
3.5.4.1 Drop Shock.		5.4.8	High
1-meter drop onto hard packed earth	2-meter drop onto hard packed earth	08D01: Right eyepiece display sector error (magnified and vertically doubled) observed after top-side drop (2nd out of 6 drops from one meter). Consequent to front-end drop (6th), objective lens focus mechanism became jammed. (T-EOTF)	
3.5.4.7 Altitude		5.4.6	High
Operate up to 15000 ft, storage up to 35,000 ft	Threshold	Storage Test (35,000 ft): 08D03 showed no external signs of damage and was observed to be fully functional after the test. (T-E-Labs c/o EOTF) Operational Test (15,000 ft): 08D03 functioned properly at low pressure, but control buttons initially malfunctioned at ambient pressure, rendering the unit non-functional. Buttons recovered action within 2days, full functionality restored. (T-E-Labs c/o EOTF)	
Significant Strengths			
3.3.1.26 Operation in an NBC Environment.			Moderate
N/A	See description	Not evaluated by EOTF	
3.3.1.27 Resistance to Decontamination Chemicals.			Moderate
N/A	Resistant to standard decontamination chemicals	Not evaluated by EOTF	
Strengths			
3.5.4.3 Temperature Range.		5.4.2	Moderate
From 0 °F to 120 °F	From -32 °F to 140 °F	08D03: Remained fully functional during and after test, and showed no external damage as a result of the temperature range. (T-E-Labs c/o EOTF)	

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## System Suitability

<b>Significant Weaknesses</b>			
None			
<b>Weaknesses</b>			
3.3.1.31 Light Emissions.		LUE, p. 21	
No visible light signature to the unaided eye	Threshold	The system exhibited an average light detection distance of 5.14 meters.	Low

**(b) (4)****Production Readiness**

Technical Subject	Rating	Risk	Comment
1. Does the facility have a production line for the MRTB?	Acceptable	Low	System is currently in production
2. Does the facility have a production manager for the MRTB?	Acceptable	Low	
3. Has the manufacturer developed and approved MRTB drawings, system specifications, processes and other documentation necessary to produce the system? (Approved drawings and information will have either seals or signatures of approval.)	Weakness	Moderate	Lacks sufficient detail
4. Has the manufacturer developed a bill-of-material (BOM) required for production of the MRTB? Inspect the BOM, quantities and deliveries and determine its adequacy to meet the production schedule and the delivery schedule.	Weakness	Moderate	Lacks sufficient detail
5. Has the manufacturer identified any long lead items required for the manufacture of the MRTB?	Weakness	Moderate	Lacks sufficient detail
6. Discuss the manufacturer's plans to acquire the necessary long-lead items. Do they have any in stock now?	Weakness	High	Lacks sufficient detail

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## Production Readiness

7. Assess the manufacturer's materiel on hand to validate the start-up time for production. Is it adequate?	Significant Weakness	High	No details. What is meant by "planned in-process".
8. Does the manufacturer have sufficient personnel on hand to produce the MRTB? What are the plans to ramp up production if a contract is awarded to the manufacturer?	Weakness	Moderate	Lacks sufficient detail. FLIR plans to add staff to meet production requirements.
9. If the manufacturer waives privities of subcontracts, determine if the manufacturer has agreements with vendors of specialized components such as optical assemblies, thermal detector assemblies, shells and casings. Else, determine how the manufacturer will acquire these components.	Acceptable	Moderate	Some risk associated with the lack of detail provided.
10. Examine the manufacturer's quality assurance program. Do they have the necessary programs in place? Who will and how will they conduct required testing?	Acceptable	Moderate	



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Technical Subject	Proposal Claim Reference	Risk	Comment
<b>Deficiencies</b>			
None			
<b>Significant Strengths</b>			
Appendix D, Delivery Schedule	Appendix D p. 2	Low	Offeror proposes to meet delivery schedule requirement of 12 month AAO after receipt of order.
<b>Strengths</b>			
3.2.3.3.1 Program Manager	p. 26, 6.3.3.1	Low	Program Manager has relevant experience and knowledge, DAWIA Level III, Level II PM
3.2.3.3.6 Training Manager	p. 27, 6.3.3.6	Low	Training manager 22 years of USMC experience
3.5 Systems Engineering	p. 28, 6.6	Low	NPI program clearly defined and will support the Systems Engineering aspects of this product. Excellent description of their lean 6-sigma SE process.
3.5.1 Reliability and Maintainability Program	p. 29, 6.6.1	Low	Excellent RAM proposal explains design, verification, and validation with their production process.
3.5.1.1 Procedures and Controls	p. 30, 6.6.1.1	Low	Procedures and controls provide efficient management of RAM
3.5.3 Quality Management System	p. 31, 6.6.3	Low	Provided quality management structure and management that is embedded into most of their production and verification processes.
3.11.2 Assessment of Initial Contract Production Units	p. 38, 6.12.2	Low	Offeror presented comprehensive outline of this event. Non-production test facility clearly identified
3.17 Training	p. 48, 6.18.1	Low	Training Manager has relevant experience and knowledge
Appendix B, Training Materials	Appendix B		Materials are well organized, and provide concise information as to the operation and functions. PPT could show more screen images of each function which would give the operators more confidence in what functions that they are performing.

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Significant Weaknesses			
3.7.1 Safety Assessment Report	p. 32, 6.8.1	Moderate	SAR lacks significant detail, no design requirement checklist, and is unsigned
3.7.2.1 Laser Support	p. 33, 6.8.2.1	Moderate	Offeror stated "...will provide...necessary laser documentation and support..." Actual forms and laser documentation not in evidence. Laser interlock is inappropriate and will not be able to pass LSRB.
3.13 Maintenance Planning	p. 44, 6.14.3	High	Offeror proposes to perform the intended SD 270 days after the requirement. The initial SD will be used to verify the maintenance and training concept to enable organic maintenance transition within a year.
Appendix A, Performance Specification	Appendix A	High	PS in proposal is in the wrong format, with no verification description of attributes.
Appendix A, MIL-STD-810F Certification	Appendix A	High	Offeror did not provide a complete Certificate of Compliance with the proposal as required.
Appendix G, MRTB Safety Assessment Report	Appendix G	HIGH	LASER DESIGN REQUIREMENT CHECKLIST AND MILITARY EXEMPT LASER DESIGNATION FORM ARE NOT INCLUDED. SAR IS NOT SIGNED, AND STATES THAT THE LASER DIODE IS 75mW. SAR is incomplete.
Weaknesses			
3.2.3.3 Assignment of Responsibility and Authority	p. 26, 6.3.3	Low	Qualifications of assigned key personnel are not well articulated. No mention of training management role.
3.5.2 Failure Reporting, Analysis, and Corrective Action System	p. 30, 6.6.2	Low	There is no mention of how the PQDR and the FRACAS will be integrated.
3.8.1 Configuration Identification	p. 34, 6.9.1	Moderate	The serial and part numbers appear to be prototype or pre-production in nature.
3.8.4.1 Engineering Change Proposals	p. 36, 6.9.4.1	Low	Vendor is requesting to shorten the concurrence period from 15 days to 5 days.

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<b>3.11 Testing Verification and Demonstration</b>	p. 37, 6.12 Appendix F	Moderate	Unclear that the Offeror has shaped their overall support/maintenance program offering with the pivotal consideration that the Government will (per SOW 3.12) in fact implement a full organic maintenance posture across all levels of maintenance upon conclusion of the ICLS increment? ILS elements should be shaped prior to 1 year ACA to support the Governments intent to transition to full organic maintenance.
<b>3.11.5 Supportability Demonstration</b>	p. 39, 6.12.5, Appendix F	Moderate	Offeror did not define events required for the SD.
<b>3.12.3.2 Warranty Exclusions</b>	p. 42, 6.13.3.2	Moderate	Offeror presented additive requirements to the exclusions, including incurring cost of shipment for non-warranty determination.
<b>3.13.3 Sustainment Level Maintenance</b>	p. 45, 6.14.3	Moderate	Offeror maintenance plan is to conduct all sustainment-level maintenance at the OEM for 2-years, but claims to transition after one year. The intent is to transition within one year.
<b>3.16 Support Equipment</b>	p. 47, 6.17.1	High	Focal Plane Array (FPA) calibration process normally requires the use of test solutions/support equipment when these components are removed and/or replaced in a system (PEI). The Governments stated intent is to transition to full organic maintenance.
<b>Appendix E, Non-Priced CLS Analysis Format</b>	Appendix E	Low	Offeror excluded the bulk parts quantities planned (Block 2) to support the ICLS effort. Offeror excluded the quantity of MRTBs (Block 3) which will be proportionally supported by the bulk parts quantities <u>which should be listed within Block 2.</u>
<b>Appendix F, MRTB Supportability Demonstration Test Plan</b>	Appendix F	Moderate	Proposed SD Test plan is very thin, and assumes Sustainment-level maintenance at the OEM, which is contrary to the maintenance concept of the MRTB program.

## Elcan MRTB640 Technical Performance

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
None			
<b>Significant Strengths</b>			
3.3.1.6.4 Laser System-On Notification.		5.2.4	
Laser operation indicator	Laser operation and mode indicator	Has laser operation indicators. When laser is armed, text message in FOV indicates the operation mode. Also, laser reticle collapses to center point when the laser is fired. Text message also indicates when laser is not armed. (D-EOTF)	Low
3.3.1.7.2 Stadiametric Scales.		5.2.6	
N/A	Stadiametric scales for human and vehicle targets	Stadiametric scales present. Scales do not obscure the center of the FOV. (D-EOTF)	Low
3.3.1.10 Magnetic Compass.		5.2.7	
N/A	Has a magnetic compass	Has a magnetic compass and inclinometer for azimuth , elevation and tilt. (D-EOTF)	Low
3.3.1.11.1 Still Image Capture and Download.		5.6.2	
N/A	Allows capture, storage, and download of images	Allows capture, storage, and download of images. Download of images is accomplished through USB port and does not require any proprietary software. Thumb drive can not be used for download, must download directly to computer. (T-EOTF)	Low
3.3.1.11.2 Video Capture and Download.		5.6.3	
N/A	Allow capture, storage, and download of video imagery	Allows capture, storage, and download of video. Download of video to computer is accomplished through USB port and requires standard MPEG4 player software to be installed on the computer. (T-EOTF)	Low

## Elcan MRTB640 Technical Performance

<b>3.3.1.14 Diopter Adjustment.</b>		<b>5.2.8 &amp; 5.7.3</b>	<b>Moderate</b>
From -2 to +2	From -6 to +2	Has diopter adjustment on each eyepiece. (I-EOTF) Diopter values not measured by the EOTF.	
<b>3.3.1.18 Mil-Std 1913 Rail.</b>		<b>5.2.14</b>	<b>Low</b>
N/A	Has a rail	Detachable Mil-Std-1913 rail provided that attaches to the top of the unit through a protected (capped) interface. (I-EOTF)	
<b>3.3.1.19 Tripod Interface.</b>		<b>5.2.15</b>	<b>Low</b>
1/4" x 20 threads per inch screw thread female socket	...located at the balance point	Has 1/4" x 20 threads per inch screw thread female socket located <b>close to the center of gravity (the balance point)</b> on the bottom of the unit. (I-EOTF)	
<b>3.3.1.21.1 Battery Type.</b>		<b>5.2.16</b>	<b>Low</b>
In Marine Corps inventory	AA or CR123 rechargeable and non-rechargeable	Operates using four standard AA rechargeable or non-rechargeable batteries. Vendor supplied L-91 type lithium batteries that were used for testing. (I-EOTF)	
<b>3.3.1.21.3 Vehicle Power Operation.</b>		<b>5.2.17</b>	<b>Low</b>
N/A	able to be powered from a vehicle with cable	Has NATO Slave cable that connects to a multifunctional adaptor cable for connection to I/O port on UUT. The NATO Slave and multifunctional cable have a combined length >12ft. Separate soft carrying case provided. (I-EOTF)	
<b>3.3.1.21.4 Battery Indicator.</b>		<b>5.6.5</b>	<b>Low</b>
Notification at 30 minutes remaining	Status bar with 30 minute indicator	The MRTB640 shall display a battery status bar that continuously indicates the remaining battery life including a specific indication when 30 minutes of battery life remain. The indicator shall be located in the upper right corner of the system display and shall not interfere or obscure targets located in the central area of the scene.	

## Elcan MRTB640 Technical Performance

Strengths				
3.3.1.1 Weight. (KPP)		5.2.1		Low
3.75 Lbs	2.5 Lbs	3.54 ± 0.02 Lbs ( T-EOTF)		
3.3.1.3 Target Recognition. (KPP)		5.3.3		Low
1100 meters	2200 meters	2000 meters (ASEF c/o EOTF)		
3.3.1.13 Field of View.		5.7.2		Low
At least 8 degrees in wide FOV	25 degrees	08G02: 12.0° ± 0.5°. (T-EOTF)		
		08G03: 12.0° ± 0.5°. (T-EOTF)		
3.3.1.20 Start-up Time.		5.6.4		Low
15 seconds	5 seconds	08G01: 10.7 ± 0.5 s. (T-EOTF)		
		08G02: 12.5 ± 0.5 s. (T-EOTF)		
3.3.1.21.2 Battery Life.		5.6.5		Low
4 hours @ 32 degrees F	8 hours @ 32 degrees F	08G01: 6 hrs and 13 minutes @ 32 degrees F. (T-E- Labs c/o EOTF)		
3.3.1.25.1 Adjustability Range.		5.7.5		Low
Adjustable for viewing in bright sunshine to total darkness	Range from no less than 0.1 foot-Lamberts to at least 23 foot-Lamberts	08GA02: 0.6 ± 0.3 fL to 70 ± 30 fL (95% CL). (T-EOTF)		
		08G03: 0.6 ± 0.2 fL to 80 ± 2 fL (95% CL). (T-EOTF)		

## Elcan MRTB640 Technical Performance

Significant Weaknesses			
3.3.1.6.1 Laser Pointer.		5.2.4	Moderate
IR laser pointer with training and operational modes	Threshold	IR laser pointer with training and operational modes. Operational mode precluded by blue blocker-type mechanism. (D-EOTF) Incident- 08G01.	
		<b>Incident- 08G01: IR laser on this unit would not fire. Blue blocker does not prevent user from engaging the operational mode because of apparent improper factory assembly.</b> As delivered, the laser arming switch stands away from the body more than normal. The resulting gap allows switch to glide over the blue block screw. <b>During SSEB deliberation laser fire switch was found to be jammed. Cause of the damage to the switch is undetermined.</b>	
Weaknesses			
3.3.1.25.2 Display Luminance Balance		5.7.6	Moderate
Eyepieces match each other to within 15%	N/A	08G02: 89 ± 4 % (95% CL). (T-EOTF)	
		08G03: 3 ± 1 % (95% CL). (T-EOTF)	
3.3.1.37.1 Image Quality.		5.3.2	Moderate
See description	Threshold	08G01: No perceivable distortion, flicker, or obstructions. Very low incidence of bright/dark pixels. <b>Significant latency and waviness for high-contrast objects.</b> Very clear image virtually free of bright/dark spots or any other artifacts. CNR point is between 1.1 and 2.0 cy/mrad. (D&T- EOTF)	
		08G02: Using collimated 4-bar image, subtle (fuzzy) distortion point observed in the center of the left eyepiece. No obstructions. Very low incidence of bright/dark pixels. <b>Significant latency and waviness for high-contrast objects.</b> Very clear image virtually free of bright/dark spots or any other artifacts (other than distortion described above). CNR point is between 1.1 and 2.0 cy/mrad. (D&T- EOTF)	
		08G03: No perceivable distortion, flicker, or obstructions. Very low incidence of bright/dark pixels. <b>Significant latency and waviness for high-contrast objects.</b> Very clear image virtually free of bright/dark spots or any other artifacts. CNR point is between 1.1 and 2.0 cy/mrad. (D&T- EOTF)	



## Elcan MRTB640 System Suitability

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
Deficiencies			
None			
Significant Strengths			
3.3.1.26 Operation in an NBC Environment.			Moderate
N/A	See description	Not evaluated by EOTF	
3.3.1.27 Resistance to Decontamination Chemicals.			Moderate
N/A	Resistant to standard decontamination chemicals	Not evaluated by EOTF	
3.3.1.30 Noise Emissions.		LUE, p. 36	Moderate
Not detectable by the unaided human ear beyond 10 meters (Threshold)	See description	The system exhibited an average noise detection distance of 0 meters. No noise was detectable by the unaided human ear at any distance from the unit.	
3.5.4.3 Temperature Range.		5.4.2	Moderate
From 0 °F to 120 °F	From -32 °F to 140 °F	08G01: Remained fully functional during and after test, and showed no external damage as a result of the temperature range. (T-E-Labs c/o EOTF)	
Strengths			
None			



## Elcan MRTB640 System Suitability

Significant Weaknesses	
None	
Weaknesses	
None	

### Elean MRTB640 Production Readiness

Technical Subject	Rating	Risk	Comment
1. Does the facility have a production line for the MRTB?	Strength	Low	Commonality between the PhantomIR and the MRTB640 submission is such that this should be a smooth transition.
2. Does the facility have a production manager for the MRTB?	Strength	Low	27 years of production management experience
3. Has the manufacturer developed and approved MRTB drawings, system specifications, processes and other documentation necessary to produce the system? (Approved drawings and information will have either seals or signatures of approval.)	Significant Strength	Low	Vendor presented evidence of their drawing package for each component. Well organized and excellent presentation of data.
4. Has the manufacturer developed a bill-of-material (BOM) required for production of the MRTB? Inspect the BOM, quantities and deliveries and determine its adequacy to meet the production schedule and the delivery schedule.	Strength	Low	Vendor has comprehensive BOM with suppliers and, in some cases, secondary suppliers identified. Provided a production BOM.
5. Has the manufacturer identified any long lead items required for the manufacture of the MRTB?	Strength	Low	Vendor provided a matrix listing long lead items.
6. Discuss the manufacturer's plans to acquire the necessary long-lead items. Do they have any in stock now?	Acceptable	Moderate	The video capture CCA is listed as having a 24 week lead time, with zero in stock.
7. Assess the manufacturer's materiel on hand to validate the start-up time for production. Is it adequate?	Acceptable	Low	

### Elcan MRTB640 Production Readiness

8. Does the manufacturer have sufficient personnel on hand to produce the MRTB? What are the plans to ramp up production if a contract is awarded to the manufacturer?	Acceptable	Moderate	
9. If the manufacturer waives privities of subcontracts, determine if the manufacturer has agreements with vendors of specialized components such as optical assemblies, thermal detector assemblies, shells and casings. Else, determine how the manufacturer will acquire these components.	Strength	Low	
10. Examine the manufacturer's quality assurance program. Do they have the necessary programs in place? Who will and how will they conduct required testing?	Acceptable	Low	

## Elcan MRTB640 ILS

Technical Subject	Proposal Claim Reference	Risk	Comment
<b>Deficiencies</b>			
None			
<b>Significant Strengths</b>			
None			
<b>Strengths</b>			
3.2.1 Program Management	p 14, 3.1.1 Program Management	Low	Clearly articulates PM's role/experience. Strong, experience program leadership will enhance the strength of the program.
3.2.3.3 Assignment of Responsibility and Authority	p. 17, 3.1.3.3	Low	All key members have upwards of 19 years of experience in their respective responsible areas.
3.2.3.3.1 Program Manager	p. 16, 3.1.3.3, Table 3-1	Low	Extensive experience and history managing thermal programs.
3.2.3.3.2 Systems Engineer	p. 16, 3.1.3.3, Table 3-1	Low	35 years of experience with EO systems. Six years as technical director for all uncooled thermal systems.
3.5.1.2 Reliability Predictions	p. 21, 3.3.5.2	Low	Use of heavily tested components; extensive shock testing of FPA.
3.5.4 Pre-Planned Product Improvement Program	p 23, 3.3.8 Pre-Planned P3I	Low	ECO and CLIC reference provides validity to their understanding of where the USMC is headed and what they need to be thinking about when it comes to their product's usefulness to the operating forces.
3.11.2.2	p 30/31 3.9.2.2 Production Refurbishment	Low	States 90 days after SD...Proposal claims 75 days.
3.12.4 Interim Contractor Logistics Support	p. 37, 3.10.3	Low	(200) PEIs & spares available as a rotatable ICLS pool to facilitate quickest turn around time. Clearly delineated ICLS repair processes across all applicable levels of effort for this are
Appendix A, MIL-STD-810F Certification	Appendix A	Low	Provided 3rd Party MIL-STD-810F verification.

## Elcan MRTB640 ILS

Appendix D, Production Schedule	Appendix D p. D2-2	Low	Offeror proposes to meet the required 12 month production and delivery schedule.
Appendix D, Delivery Schedule	Appendix D p. D2-3	Low	Offeror proposes to meet the required 12 month production and delivery schedule.
<b>Significant Weaknesses</b>			
3.12 Integrated Logistics Support	p. 34, 3.10, 3.10.1, Fig 3.10	Moderate	Offeror does not specifically speak to the Governments' requirement to transition to an organic maintenance posture per SOW 3.12 within one (1) year. This presents risk that may adversely affect cost and schedule.
3.12.3.2 Warranty Exclusions	p. 37, 3.10.2.2	High	Proposed warranty exclusions fully address requirement in the SOW. Additional exclusions have been included in the proposal (damage during storage or transport) presenting a risk that may adversely affect cost.
3.12.4.3 Receipt and Inspections	p. 38, 3.10.3.2	High	Proposal suggesting the use of the RIP and Raytheon's SECREP program appears to use USMC facilities, transportation and funds to ship defective units to/from manufacturer vice proposals stated "manufacturer will incur costs associated with shipment"
3.12.4.7 Transportation	p. 40, 3.10.3.5: p. 36, 3.10.2	High	Proposal suggesting the use of the SECREP program and "utilizing the ATAC shipping withing the Marine Corps" appears to use USMC facilities, transportation and funds to ship defective units to/from manufacturer vice proposals stated "manufacturer will incur costs associated with shipment"
Appendix G, MRTB Safety Assessment Report	Appendix G	High	Proposal does not show risk assesment of laser related incidents(e.g. inadvertant laser exposure). Regardless of the fact that the Design Requirement checklist is filled out, there has been no identification of any risks associated.

## Elcan MRTB640 ILS

Weaknesses			
3.2.3 Data Management System (DMS)	p 15, 3.1.3	Low	The proposed DMS provides excellent internal access to documentation, but there are no listed provisions for Government access. DMS description does not state if the government will access this information via website or as a delivered data package.
3.3.1 GFE/GFP	p 18, 3.2.1 GFE/GFP	Low	Does not provide any details regarding storage facilities or accountability/security/inspection procedures that will be employed.
3.5.2 Failure Reporting, Analysis, and Corrective Action System	p 22, 3.3.6	Low	There is no mention of how the PQDR and the FRACAS will be integrated. No mention of quarterly failure reporting to the government, only a generic "as required per contract, or as required per CDRLs"
3.5.3 Quality Management System	p. 21, 3.7, p. 21	Low	No explicit mention of the Government's access to the quality management system. Proposal did not address access to the QMS using NMCI
3.6 Producibility	p 26 3.4	Moderate	Proposal does not address activities at the PAC and SD, and Government review of production control, quality control, tooling, and inspection. Very skimpy response to requirements.
3.7.1 Safety Assessment Report	p 26, 3.5.1	High	Not completed and not intended to be completed until 30 days after contract award. If they don't pass, then what?
3.11 Testing Verification and Demonstration	p. 31-32, Section 3.9	Moderate	Proposal is a little vague in responding to request for a single all encompassing test plan. Does state "the test plan" and states "a cross-reference performance requirements verification report that verifies all requirements are met." A little vague on how the nonconformance of initial contract production articles would be handled. No mention of FIAR or FRACAS.

## Elcan MRTB640 ILS

<b>3.11.2 Assessment of Initial Contract Production Units</b>	p. 30, 3.9.2	Moderate	Does not adequately address the requirement to "demonstrate the adequacy and suitability of the contractor's production processes and procedures for achieving the requirements..." Offeror speaks to accomplishing the details relative to 810 F area, only. Lacking a provided comprehensive approach to achieving elements described in SOW 3.11.2 i.e. a track back to the Offerors PS within the context of CLIN 0001.
<b>3.11.2.1 Nonconformance of Initial Contract Production Units</b>	p. 30, 3.9.2.1	Low	FIAR and FRACAS not addressed in this paragraph of the proposal.
<b>3.11.5 Supportability Demonstration</b>	p. 33, 3.9.5 & Appendix F	Moderate	Proposal paragraph 3.9.5 does not specifically address how the SD will achieve the items/concerns listed in SOW paragraph 3.11.5 a thru h with the exception of 3.11.5 c.
<b>3.11.5.1 Supportability Demonstration Plan</b>	p. 33, 3.9.5.1	Medium	Proposed to conduct SD at a Marine Corps facility, which negates the collective benefits of SD, PAT, and AICPU.
<b>3.12.1 ILS Management Team Integrated Product Team</b>	p 33, 3.10.1	Moderate	Support Concept bullets list method of support as turning unit into the "RIP". This item will be a SAC 3 End item, not eligible for support by the Repairable Issue Points.
<b>3.13.3 Sustainment Level Maintenance</b>	p. 42, 3.11.3	Moderate	Stated that there are sustainment-level repairs required for the MRTB because of re-alignment issues.
<b>Appendix A, Performance Specification</b>	Appendix A	Moderate	Missing the entire Section 4, 5, & 6 of PerfSpec. Verification column does not reflect how attributes will be verified. Document is in the wrong format.

## Elcan MRTB640 ILS

Appendix B, Training Materials	Appendix B	Low	Very little covered in operators manual regarding maintenance, and nothing on troubleshooting. Training presentation does not show battery installation, reticle patterns, and other items from the operators manual which would be extremely important in providing operators the basic principles of the function of the system. Also, there is no operator maintenance or trouble shooting in the training materials. BIT test not covered in training materials.
Appendix E, Non-Priced CLS Analysis Format	Appendix E	Low	Mount Plug repair and management stated at 6.23 hours on the surface appears excessive for the application of three screws, please clarify. Processor Adapter CCA (7.42 Hrs), Video Capture CCA (7.42 Hrs) and Processor CCA (5.16 Hrs) per Fig F-3 appear to be stacked in the order just described as part of a card stack. Clarify why the Procesor CCA takes 2.26 fewer hours to repair (replace?) and manage than those situated on top of it. Laser Mount Assy (9.87 Hrs) please clarify stated time to repair/ manage; on the surface appears excessive for the application of an assembly and alignment of the laser and display reticle. Stated repair (replacement?) and management times for the following assemblies appear excessive, please clarify: Eyepiece Assy. (6.56 Hrs), Objective Assy. (17.07 Hrs), Dust Plug Assy. (1.28 Hrs), Laser Cover Assy (1.42 Hrs), Rubber Focus Grip (2.45 Hrs), Battery Cover Assy. (2.59 Hrs), Battery Cover Assy. (2.59 Hrs), Battery Box Assy. (5.81 Hrs), Bottom Cover (6.37 Hrs), Interpupillary Knob Assy. (9.29 Hrs), and Power Switch Assy. (8.03 Hrs).



(b) (4)

Technical Performance

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
Deficiencies			
3.3.1.3 Target Recognition. (KPP)		5.3.3	High
1100 meters	2200 meters	821 meters (ASEF c/o EOTF)	
Significant Strengths			
3.3.1.6.4 Laser System-On Notification.		5.2.4	Low
Laser operation indicator	Laser operation and mode indicator	Has laser operation indicators. When laser is armed, text message in FOV indicates the operation mode. Also, laser reticle collapses to center point when the laser is fired. Text message also indicates when laser is not armed. (D-EOTF)	
3.3.1.10 Magnetic Compass.		5.2.7	Low
N/A	Has a magnetic compass	Has a magnetic compass and inclinometer for azimuth , elevation and tilt. (D-EOTF)	
3.3.1.14 Diopter Adjustment.		5.2.8 & 5.7.3	Moderate
From -2 to +2	From -6 to +2	Has diopter adjustment on each eyepiece. (I-EOTF) Diopter values not measured by the EOTF.	
3.3.1.19 Tripod Interface.		5.2.15	Low
¼" x 20 threads per inch screw thread female socket	...located at the balance point	Has ¼" x 20 threads per inch screw thread female socket located close to the center of gravity on the bottom of the unit. (I-EOTF)	
3.3.1.20 Start-up Time.		5.6.4	Low
15 seconds	5 seconds	08A01: 3.4 ± 0.5 s. (T-EOTF) 08A02: 3.8 ± 0.5 s. (T-EOTF)	

(b) (4)

## Technical Performance

3.3.1.21.1 Battery Type.		5.2.16		Low
In Marine Corps inventory	AA or CR123 rechargeable and non-rechargeable	Operates using four standard AA rechargeable or non-rechargeable batteries. Vendor supplied L91 type lithium batteries that were used for testing. (I-EOTF)		
3.3.1.21.4 Battery Indicator.		Proposal p. 7, 2.2.1.18.3; 3.3.1.17.3, p. A1-7		Low
Notification at 30 minutes remaining	Status bar with 30 minute indicator	The MRTB320 shall display a battery status bar that continuously indicates the remaining battery life including a specific indication when 30 minutes of battery life remain. The indicator shall be located in the upper right corner of the system display and shall not interfere or obscure targets located in the central area of the scene.		
Strengths				
3.3.1.1 Weight. (KPP)		5.2.1		Low
3.75 Lbs	2.5 Lbs	3.58 ±0.02 Lbs (with hand and neck straps) ( T-EOTF)		
3.3.1.13 Field of View.		5.7.2		Low
At least 8 degrees in wide FOV	25 degrees	08A01: 10.3° ± 0.5°. (T-EOTF)		
		08A02: 11.1° ± 0.5°. (T-EOTF)		
3.3.1.21.2 Battery Life.		5.6.5		Low
4 hours @ 32 degrees F	8 hours @ 32 degrees F	08A01: 5 hrs and 41 minutes @ 32 degrees F. (T-E- Labs c/o EOTF)		
3.3.1.25.1 Adjustability Range.		5.7.5		Low
Adjustable for viewing in bright sunshine to total darkness	Range from no less than 0.1 foot-Lamberts to at least 23 foot-Lamberts	08A01: 0.2 ± 0.1 fL to 37 ± 1 fL (95% CL). (T-EOTF)		
		08A02: 0.5 ± 0.4 fL to 98 ± 3 fL (95% CL). (T-EOTF)		
Significant Weaknesses				
None				

(b) (4)

## Technical Performance

Weaknesses			
3.3.1.37.1 Image Quality.		5.3.2	Moderate
See Description	Threshold	<b>08A01:</b> No perceivable distortion, flicker, or obstructions. Very low incidence of bright/dark pixels. <b>Some noticeable latency and waviness for high-contrast objects. There is vertical image shift, barely noticeable, from top to bottom near the right edge of the critical viewing area. CNR point is between 0.6 and 1.1 cy/mrad. (D&amp;T-EOTF)</b>	
		<b>08A02:</b> No perceivable distortion, flicker, or obstructions. Very low incidence of bright/dark pixels. <b>Some noticeable latency and waviness for high-contrast objects. There is vertical image shift, barely noticeable, from top to bottom near the right edge of the critical viewing area. CNR point is between 0.6 and 1.1 cy/mrad. (D&amp;T-EOTF)</b>	
		<b>08A02:</b> No perceivable distortion, flicker, or obstructions. Very low incidence of bright/dark pixels. <b>Some noticeable latency and waviness for high-contrast objects. There is vertical image shift, barely noticeable, from top to bottom near the right edge of the critical viewing area. CNR point is between 0.6 and 1.1 cy/mrad. (D&amp;T-EOTF)</b>	



(b) (4)

## System Suitability

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
3.5.4.7 Altitude		5.4.6	
Operate up to 15000 ft, storage up to 35,000 ft	Threshold	<b>Storage Test (35,000 ft):</b> 08A03 control buttons compressed, rendering the unit non-functional. Upon powering up, unit goes into a calibration loop. Buttons have not recovered action. (T-E-Labs c/o EOTF) <b>Operational Test (15,000 ft):</b> 08A03 functioned properly at low pressure, but buttons became compressed at ambient pressure, rendering the unit non-functional. Buttons recovered action within 2days, full functionality restored. (T-E-Labs c/o EOTF)	High
<b>Significant Strengths</b>			
3.3.1.30 Noise Emissions.		LUE p. 6	
Not detectable by the unaided human ear beyond 10 meters (Threshold)	See description	The system exhibited an average noise detection distance of 6.3 meters.	Moderate
<b>Strengths</b>			
None			

**(b) (4)****Technical Performance**

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
None			
<b>Significant Strengths</b>			
3.3.1.6.4 Laser System-On Notification.		5.2.4	
Laser operation indicator	Laser operation and mode indicator	Has laser operation indicators. "----X" appears in the FOV when the laser is armed, and does not indicate operation mode. When laser fired, the indicator is expanded to include the operation mode (e.g. "----XL" for low power, "----XH" for high power). (D-EOTF)	Low
3.3.1.7.2 Stadiametric Scales.		5.2.6	
N/A	Stadiametric scales for human and vehicle targets	Stadiametric scales present. Scales do not obscure the center of the FOV. (D-EOTF)	Low
3.3.1.10 Magnetic Compass.		5.2.7	
N/A	Has a magnetic compass	Has a magnetic compass. (D-EOTF)	Low
3.3.1.14 Diopter Adjustment.		5.2.8 & 5.7.3	
From -2 to +2	From -6 to +2	Has diopter adjustment on each eyepiece. (I-EOTF) Diopter values not measured by the EOTF.	Moderate
3.3.1.18 Mil-Std 1913 Rail.		5.2.14	
N/A	Has a rail	Has Mil-Std-1913 rail provided as an accessory. Rail potentially interferes with focusing and some of the control buttons. (I-EOTF)	Moderate
3.3.1.19 Tripod Interface.		5.2.15	
1/4" x 20 threads per inch screw thread female socket	...located at the balance point	Has a female 1/4" x 20 socket located on the bottom, and near balance point. (I-EOTF)	Low

**(b) (4)****Technical Performance**

3.3.1.20 Start-up Time.		5.6.4	Low
15 seconds	5 seconds	08E01: 4.1 ± 0.5 s. (T-EOTF)	
		08E02: 3.8 ± 0.5 s. (T-EOTF)	
3.3.1.21.1 Battery Type.		5.2.16	Low
In Marine Corps inventory	AA or CR123 rechargeable and non-rechargeable	Operates on 1.5 V AA type batteries, 8 per load. L91 type lithium provided by vendor and used for all testing. (I-EOTF)	
3.3.1.21.3 Vehicle Power Operation.		5.2.17	Low
N/A	able to be powered from a vehicle with cable	Has accessory cable with NATO Slave connector which permits connection to vehicle power. The NATO Slave cable connects to the detachable multifunctional I/O cable (see "Video and Data Output Connectivity") for a combined length of > 12 ft. Separate soft case provided. (I-EOTF)	
3.3.1.21.4 Battery Indicator.		From Proposal p. 10, 1.2.2, A1.8	Low
Notification at 30 minutes remaining	Status bar with 30 minute indicator	Graphical status bar shows remaining life. Words "LOW BATT" appear beside status bar when approx. 30 minutes remain.	
3.3.1.21.8 External Power.		5.2.19	Low
N/A	115 VAC, 60 Hz power through Video/Data port	No AC/DC converter provided, though 19-pin multifunctional port has power-in capability.	
Strengths			
3.3.1.1 Weight. (KPP)		5.2.1	Low
3.75 Lbs	2.5 Lbs	3.68 ± 0.02 Lbs (without straps) ( T-EOTF)	
3.3.1.3 Target Recognition. (KPP)		5.3.3	Low
1100 meters	2200 meters	1332 meters (ASEF c/o EOTF)	
3.3.1.5 Fields of View.		5.2.3	Low
Digital wide and narrow FOVs	Optical wide and narrow FOVs	Digital wide, and narrow (3x) FOVs (D-EOTF)	
3.3.1.16.1 System Adjustments.		5.2.10	Low
Polarity, brightness, and contrast directly accessible from level one of a menu system	... by individual and independent controls	For brightness, system has both display brightness and detector level adjustments. Display brightness is adjustable with single push button (full cycle format). Gain and Level adjustments are accomplished with individual rocker switches. Polarity directly adjusted with individual button. (AGC is directly disabled with individual button). Buttons have dual functions. (D-EOTF)	

## (b) (4) Technical Performance

3.3.1.21.2 Battery Life.		5.6.5	Low
4 hours @ 32 degrees F	8 hours @ 32 degrees F	08E01: 7 hrs and 41 minutes @ 32 degrees F. (T-E- Labs c/o EOTF)	
3.3.1.25.1 Adjustability Range.		5.7.5	Low
Adjustable for viewing in bright sunshine to total darkness	Range from no less than 0.1 foot-Lamberts to at least 23 foot-Lamberts	08EA01: 0.4 ± 0.1 fL to 210 ± 20 fL (95% CL). (T-EOTF)	
		08E02: 0.4 ± 0.1 fL to 190 ± 20 fL (95% CL). (T-EOTF)	
Significant Weaknesses			
3.3.1.6.2 Laser Reticle.		5.2.4 & 5.3.1	High
Laser Pointer Reticle	Threshold	There is a general reticle, not a laser-specific reticle. The laser may be fired with the reticle disabled, providing no indication of laser aim-point.	
3.3.1.6.7 Laser Beam Divergence.		5.5.2	Moderate
0.5 mrad (± 0.3 mrad)	Threshold	08E01: Vert. = 3.06 ± 0.09 mrad.; Hor. = 2.98 ± 0.09 mrad; Radial = 4.3 ± 0.1 mrad. Divergence exceeds threshold. Variation between bid samples shows possible quality control problem. (T-EOTF)	
		08E02: Vert. = 0.65 ± 0.09 mrad.; Hor. = 0.57 ± 0.09 mrad; Radial = 0.8 ± 0.1 mrad. (T-EOTF)	
Weaknesses			
3.3.1.13 Field of View.		5.7.2	High
At least 8 degrees in wide FOV	25 degrees	08E01: 14.3° ± 0.5°. (T-EOTF)	
		08E02: 18.0° ± 0.5°. (T-EOTF)	
3.3.1.24 Harness.		5.2.20	Low
Has a PALS harness	Threshold	Has PALS-compatible, retractable and locking lanyard with slide release latch for quick release capability. Provided in black, failing to meet the requirement for the harness to be in Coyote Brown 486/498. (I-EOTF)	
3.3.1.29 Body Finish.		5.2.21	Moderate
Light reflections and glint are minimized	Threshold	Device is encased in rubber flat black coating (boot), which was very flimsy and experienced numerous rips and other damage during testing and routine handling. Lens cover, eyecups, control buttons/switches and device itself have a flat black finish. (I-EOTF)	

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## Technical Performance

3.3.1.37.1 Image Quality.		5.3.2	Moderate
See Description	Threshold	08E01: No perceivable distortion, flicker, or obstructions. Significant latency and waviness when panning. Double vision of main menu observed. Left eyepiece has more-blue cast than the right. Several artifacts observed, including ghost circles, rings, and a dark pixel cluster near the left edge of the critical area. CNR point is between 1.1 and 2.0 cy/mrad. (D&T- EOTF)	
		08E02: No perceivable distortion or obstructions. Sporadic horizontal white striping observed. Significant latency and waviness when panning. Double vision of main menu observed. Left eyepiece has more-blue cast than the right. Several artifacts observed, including ghost circles, rings, and dark spots (not clusters). CNR point is between 1.1 and 2.0 cy/mrad. (D&T- EOTF)	
		08E03: No perceivable distortion or obstructions. Sporadic horizontal white striping observed. Significant latency and waviness when panning. Double vision of main menu observed. Left eyepiece has more-blue cast than the right. Several artifacts observed, including ghost circles, and dark spots (not pixel clusters). CNR point is between 1.1 and 2.0 cy/mrad. (D&T- EOTF)	



**(b) (4) System Suitability**

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
3.5.4.2 Immersion.		5.4.9	
3 feet of seawater for 15 minutes	66 feet of seawater for 2 hours	08E01: Unit was immersed in tap water at a pressure equivalent to 3 ft of seawater for 15 minutes, then removed. Upon initial inspection: no external damage was observed and unit remained fully functional; no evidence observed of water intrusion through laser cap, I/O cap, nor battery cap; no condensation observed in viewfinder. <b>However, inspection 24 hours after immersion revealed: the unit would no longer present a thermal image; electronic controls were non-functional; the unit could not be turned off without removing the batteries; and condensation was observed behind the eyepieces. Note- This bid sample was not subjected to temperature tests. (T-EOTF)</b>	High
<b>Significant Strengths</b>			
3.3.1.26 Operation in an NBC Environment.			
N/A	See description	Not evaluated by EOTF	Moderate
3.3.1.30 Noise Emissions.		LUE, p. 26	
Not detectable by the unaided human ear beyond 10 meters (Threshold)	See description	The system exhibited an average noise detection distance of 5 meters.	Moderate
3.5.4.3 Temperature Range.		5.4.2	
From 0 °F to 120 °F	From -32 °F to 140 °F	08E03: Remained fully functional during and after test, and showed no external damage as a result of the temperature range. (T-E-Labs c/o EOTF)	Moderate
<b>Strengths</b>			
None			

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## System Suitability

Significant Weaknesses			
3.5.4.4 Temperature Shock.		5.4.3	
From -32 °C to 50 °C	Threshold	08E03: No external or functional damage observed as a result of the temperature shock test. However, battery chamber apparently warped, because a battery became lodged in chamber as a result of test. Battery could later be pried from unit with a tool, but subsequently inserted batteries also became jammed. Regardless, unit remains functional. (T-E-Labs c/o EOTF)	High
Weaknesses			
3.7 Safety and Hazards.			
Minimal hazards	Threshold	Accessory 1913 rail presents both a snag and sharp edge hazard.	Low

**(b) (4) Production Readiness**

Technical Subject	Rating	Risk	Comment
1. Does the facility have a production line for the MRTB?	Strength	Low	24 dedicated workstations and all associated tooling and test equipment for MRTB production.
2. Does the facility have a production manager for the MRTB?	Strength	Low	(b) (4) has good experience and is a proven performer.
3. Has the manufacturer developed and approved MRTB drawings, system specifications, processes and other documentation necessary to produce the system? (Approved drawings and information will have either seals or signatures of approval.)	Weakness	High	"NVS acknowledges that minor changes may be included at contract award, or during the execution of the designated program performance period." There is no indication of what constitutes "minor". Additionally, the SOW contains specific requirements for making changes to the MRTB after contract award (ECPs, etc.); these are not reflected in the above statement or accompanying paragraphs. This is not indicative of a production item.
4. Has the manufacturer developed a bill-of-material (BOM) required for production of the MRTB? Inspect the BOM, quantities and deliveries and determine its adequacy to meet the production schedule and the delivery schedule.	Weakness	Moderate	Vendor provided no detail about the BOM.
5. Has the manufacturer identified any long lead items required for the manufacture of the MRTB?	Acceptable	Low	



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## Production Readiness

6. Discuss the manufacturer's plans to acquire the necessary long-lead items. Do they have any in stock now?	Strength	Moderate	Claims to have secondary plan for obtaining long lead items. Details on impact to other production lines have been examined and coordinated to reduce risk.
7. Assess the manufacturer's materiel on hand to validate the start-up time for production. Is it adequate?	Strength	Low	Vendor states on hand material is adequate to support first article delivery and subsequent ramp requirements.
8. Does the manufacturer have sufficient personnel on hand to produce the MRTB? What are the plans to ramp up production if a contract is awarded to the manufacturer?	Acceptable	Moderate	Have a plan for the increased hire. Risk is inherent to this area of effort.
9. If the manufacturer waives privities of subcontracts, determine if the manufacturer has agreements with vendors of specialized components such as optical assemblies, thermal detector assemblies, shells and casings. Else, determine how the manufacturer will acquire these components.	Weakness	High	Reliance on business relationships and undocumented agreements are too risky.
10. Examine the manufacturer's quality assurance program. Do they have the necessary programs in place? Who will and how will they conduct required testing?	Acceptable	Low	

(b) (4) ILS

Technical Subject	Proposal Claim Reference	Risk	Comment
<b>Deficiencies</b>			
None			
<b>Significant Strengths</b>			
None			
<b>Strengths</b>			
3.2.3.3 Assignment of Responsibility and Authority	p. 14, 1.3.1	Low	Well presented and personnel involved very qualified.
3.12.3 Warranty	p. 37, 1.5.2	Low	Offeror warranty period exceeds requirement of 2 years (offering 3 year warranty)
Appendix A, MIL-STD-810F Certification	Appendix A	Low	Offeror presented signed third party certification of MIL-STD-810F compliance.
Appendix D, Delivery Schedule	Appendix D	Low	Offeror proposed delivery of AAO within 12 months after initial production articles.
<b>Significant Weaknesses</b>			
3.2.3.2 Schedule Planning	p. 18, 1.3.4	High	No detail on schedule planning provided.
3.4.2 Post Award Conference	p. 16, 1.3.2	Low	Provides a notional schedule for meetings and nothing else. No information on meeting/review content is provided.
3.4.3 In-Process Review	p. 16, 1.3.2	Low	Provides a notional schedule for meetings and nothing else. No information on meeting/review content is provided.
3.4.4 Production Readiness Review	p. 16, 1.3.2	Low	Provides a notional schedule for meetings and nothing else. No information on meeting/review content is provided.

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3.5 Systems Engineering	p. 20, 1.4.1	High	From the description in this section, the proposed system appears to be new, to some extent building off of several existing products (the MX product line). Phrases such as "The resulting product yields..." (p. 21) indicate that this system is not in production and was built specifically to satisfy this solicitation.
3.5.1.2 Reliability Predictions	p. 25, 1.4.1.5	High	The MTBF is listed at 3 different values, Page 26 of the Tech Volume lists MTBF as 4376 hours, Page 2 of the Tech Volume lists the MTBF as 3000 hours. Page 6 of the Safety Assessment gives an item description, showing 800 hours as the MTBF for this device?
3.7.2.1 Laser Support	p. 31, 1.4.6, Appendix G	Moderate	Offeror failed to provide Military Exempt Laser Designation Request letter.
3.8 Configuration Management	p. 26-28, 1.4.2	Moderate	Configuration Control discussion has errors and Class I ECPs will not be approved by the local DCMA.
3.8.1 Configuration Identification	p. 26, 1.4.2	High	From the proposal, "NVS acknowledges that minor changes may be included at contract award and will incorporate any agreed to changes into the PBL." The changes shall not be initiated by the vendor.
3.8.1.1 Configuration Status Accounting	p.26, 1.4.2	Moderate	Does not address access to electronic DMS related to CSA. Contractor uses definitions rather than outlining how CSA is done.
3.8.4 Configuration Control	p.28, 1.4.2	High	DCMA will not be giving final approval for a Class I ECP. The review HAS to go through govt (PMO) approval cycle. Contractors ECP process must include this. Change approval authority only exists with govt.
3.8.4.1 Engineering Change Proposals	p. 28, 1.4.2,	High	DCMA is not the decision authority for class I ECPs; this needs to be corrected.
3.11.2 Assessment of Initial Contract Production Units	p. 29, 1.4.3	High	Brief mention of this test. No detail provided.
3.12.4.3 Receipt and Inspections	p. 43, 1.5.2.4	Low	Contractor does not explain process for Receipt and Inspection in the proposal.
3.12.4.4 Inspection and Acceptance	p. 43, 1.5.2.4	Low	Contractor does not explain process for inspection and acceptance in the proposal.

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<b>3.15 Technical Publications</b>	p. 44, 1.5.2.5	Moderate	Ambiguous technical manual description. It is unknown whether there will be two manuals as required in the RFP and SOW. An SSP has not yet been defined for MRTB; it is confusing and improbable that the elements and procedures involving this SSP are published.
<b>Weaknesses</b>			
<b>3.2.3 Data Management System</b>	p. 18, 1.3.4,	Moderate	Software provided is not installable on Government computers. Proposed laptop computer is not compatible with NMCI network and is not an acceptable solution. Does not specify Government access portal on NMCI for DMS
<b>3.4 Meetings, Formal Reviews, Conferences, Audits and Cost Estimation Products</b>	p. 16, 1.3.2	Moderate	This section covers all reviews in a general discussion and shows Figure 1.3.2-1. This discussion does not say what will be covered, only the reviews will be held on certain dates.
<b>3.5.2 Failure Reporting, Analysis, and Corrective Action System</b>	p. 22, 1.4.1.1	Moderate	There is no mention of how the PQDR and the FRACAS will be integrated.
<b>3.5.3 Quality Management System</b>	p. 23, 1.4.1.2	Moderate	Does not address access to electronic DMS related to QMS.
<b>3.7.1 Safety Assessment Report</b>	p. 33, 1.4.6.1 Appendix G	Low	SAR not signed
<b>3.8.2 Parts Management Program</b>	p. 27, p. 29, 1.4.2	Moderate	Offeror fails to attest to delivering a Parts Management Plan within 30 days of contract award or provide transparency to the elements referenced for inclusion in the Parts Management Plan per SOW 3.8.2.
<b>3.8.3 Baseline Management</b>	p. 27, 1.4.2	Moderate	Baseline management is not explained. Scope is undefined.
<b>3.9.2 Sub Assembly Date Plate Information</b>	p. 31, 1.4.5	Moderate	Text box mentions DFMA, which indicates developmental activities.

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<b>3.10 Diminishing Manufacturing Sources and Material Supply</b>	p. 28, 1.4.2.1	Moderate	This material presented is confusing with little merit. Does not discuss DMSMS indentures, management and reporting in any meaningful way. This is based on statement "obsolescence risk is virtually eliminated through our DFMA initiative and organic production capabilities." Also the statement is made "NVS's line of balance for the MRTB is established with parts and components procured from suppliers who have confirmed all such items are continuous run with no planned obsolescence design changes for the life of the MRTB productions program." Since this is an IDIQ program this is not possible.
<b>3.11 Testing Verification and Demonstration</b>	p. 29, 1.4.3	Moderate	Insufficient detail to evaluate contractors efforts.
<b>3.11.1 Test Plan</b>	p. 29, 1.4.3 Appendix F	Moderate	Offeror provided poor explanation of supportability information.
<b>3.11.3 Production Acceptance Test</b>	p. 29, 1.4.3 Appendix F	Moderate	Did not convey a grasp of what this event is intended to demonstrate.
<b>3.11.5 Supportability Demonstration</b>	p. 29, 1.4.3 Appendix F	High	SOW referenced SSP is not clearly spoken to, the lack of attestation to the development of the pivotal SSP is a concern. The Governments intent is a "tangible solution" 90 days ACA. Offeror does not scope the SD except to state that it is related to logistics. Also the Offeror has an entire paragraph dedicated to nothing. The SD was mentioned in several places throughout the document, with noreference in their Work Compliance Matrix.
<b>3.12.3.2 Warranty Exclusions</b>	p. 38, 1.5.2.9	Moderate	Offeror added exclusions (e.g. USMC Authorized personnel maintenance) that are additive to the requirement.



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3.12.4 Intrim Contractor Logistics Support	p. 38, 1.5.2.1	Moderate	Offeror claims a 3000 hr reliability estimate which conflicts with 1.4.1.5. Also provides conflicting return rates for comparative products. Offeror recommending an increase at Government expense of 10 float systems in order to meet their turn-around requirement time. Offeror provided a weak transition explanation for organic maintenance.
3.13.3 Sustainment Level Maintenance	p. 42, 1.5.2.2	Moderate	Offeror did not articulate specific sustainment level maintenance activities within the context of the Sustainment Level Maintenance discussion on p. 42 of the proposal.
Appendix A, Performance Specification	Appendix A	Moderate	Offeror did not provide any detail in their performance specification regarding verification of system attributes, and regurgitated the language of PS-MRTB-001 almost entirely verbatim.
Appendix G, MRTB Safety Assessment Report	Appendix G	Moderate	Not signed. No DOD exemptions request letter.

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**System Suitability**

<b>Significant Weaknesses</b>	
None	
<b>Weaknesses</b>	
None	

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Production Readiness

Technical Subject	Rating	Risk	Comment
1. Does the facility have a production line for the MRTB?	Strength	Low	Commonality between the PhantomIR and the MRTB320 submission is such that this should be a smooth transition.
2. Does the facility have a production manager for the MRTB?	Strength	Low	27 years of production management experience
3. Has the manufacturer developed and approved MRTB drawings, system specifications, processes and other documentation necessary to produce the system? (Approved drawings and information will have either seals or signatures of approval.)	Significant Strength	Low	Vendor presented evidence of their drawing package for each component. Well organized and excellent presentation of data.
4. Has the manufacturer developed a bill-of-material (BOM) required for production of the MRTB? Inspect the BOM, quantities and deliveries and determine its adequacy to meet the production schedule and the delivery schedule.	Strength	Low	Vendor has comprehensive BOM with suppliers and, in some cases, secondary suppliers identified. Provided a production BOM.
5. Has the manufacturer identified any long lead items required for the manufacture of the MRTB?	Strength	Low	Vendor provided a matrix listing long lead items.
6. Discuss the manufacturer's plans to acquire the necessary long-lead items. Do they have any in stock now?	Acceptable	Low	
7. Assess the manufacturer's materiel on hand to validate the start-up time for production. Is it adequate?	Acceptable	Low	

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Production Readiness

8. Does the manufacturer have sufficient personnel on hand to produce the MRTB? What are the plans to ramp up production if a contract is awarded to the manufacturer?	Acceptable	Moderate	
9. If the manufacturer waives privities of subcontracts, determine if the manufacturer has agreements with vendors of specialized components such as optical assemblies, thermal detector assemblies, shells and casings. Else, determine how the manufacturer will acquire these components.	Strength	Low	
10. Examine the manufacturer's quality assurance program. Do they have the necessary programs in place? Who will and how will they conduct required testing?	Acceptable	Low	

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Technical Subject	Proposal Claim Reference	Risk	Comment
<b>Deficiencies</b>			
None			
<b>Significant Strengths</b>			
None			
<b>Strengths</b>			
3.2.1 Program Management	p 14, 3.1.1	Low	Clearly articulates PM's role/experience. Strong, experience program leadership will enhance the strength of the program.
3.2.3.3 Assignment of Responsibility and Authority	p. 16-17, 3.1.3.3	Low	All key members have upwards of 19 years of experience in their respective responsible areas.
3.2.3.3.1 Program Manager	p. 16, 3.1.3.3, Table 3-1	Low	Extensive experience and history managing thermal programs.
3.2.3.3.2 Systems Engineer	p. 16, 3.1.3.3, Table 3-1	Low	35 years of experience with EO systems. Six years as technical director for all uncooled thermal systems.
3.5.4 Pre-Planned Product Improvement (P3I) Program	p 22, 3.3.8	Moderate	Proposal incorporates innovative product improvements that may be of interest to the Marine Corps.
3.11.2.2 Production Refurbishment	p 30/31 3.9.2.2	Low	Vendor will deliver refurbished units within 75 days, exceeding the Government's requirement of 90 days.
3.12.4 Interim Contractor Logistics Support	p. 35, 3.10.3	Low	(200) PEIs & spares available as a rotatable ICLS pool to facilitate quickest turn around time. Clearly delineated ICLS repair processes across all applicable levels of effort.
Appendix A, MIL-STD-810F Certification	p. A2-33 to A2-34	Low	Provided 3rd Party MIL-STD-810F verification. Loose cargo test conducted in hard case, even though this test is not in the perf specification.
Appendix D, Production Schedule	p. D2-2, Table D2-1	Low	Offeror proposes to meet the required 12 month production and delivery schedule.



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Appendix D, Delivery Schedule	p. D2-3, Table D2-2	Low	Offeror proposes to meet the required 12 month production and delivery schedule.
<b>Significant Weaknesses</b>			
3.12 Integrated Logistics Support	p. 31, 3.10; p. 33-34, 3.10.1; p. 34, Fig 3.10	Moderate	Offeror does not specifically speak to the Governments' requirement to transition to an organic maintenance posture per SOW 3.12 within one (1) year. This presents risk that may adversely affect cost and schedule.
3.12.3.2 Warranty Exclusions	p. 34, 3.10.2.2	High	Proposed warranty exclusions fully address requirement in the SOW. Additional exclusions have been included in the proposal (damage during storage or transport) presenting a risk that may adversely affect cost.
3.12.4.3 Receipt and Inspections	p. 34, 3.10.2; p. 37, 3.10.3.2	High	Proposal suggesting the use of the RIP and Raytheon's SECREP program appears to use USMC facilities, transportation and funds to ship defective units to/from manufacturer vice proposal's stated "manufacturer will incur costs associated with shipment"
3.12.4.7 Transportation	p. 34, 3.10.2; p. 38, 3.10.3.5	High	Proposal suggesting the use of the SECREP program and "utilizing the ATAC shipping withing the Marine Corps" appears to use USMC facilities, transportation and funds to ship defective units to/from manufacturer. Proposal offers the alternative of using Vendor's relationship with UPS logisitics group to provide global support to the product.
Appendix G, MRTB Safety Assessment Report	p. G-5 to G-19	High	Proposal does not show risk assesment of laser related incidents(e.g. inadvertant laser exposure). Regardless of the fact that the Design Requirement checklist is filled out, there has been no identification of any risks associated.

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Weaknesses			
3.2.3 Data Management System (DMS)	p 15, 3.1.3	Low	The proposed DMS provides excellent internal access to documentation, but there are no listed provisions for Government access. DMS description does not state if the government will access this information via website or as a delivered data package.
3.3.1 Government Furnished Equipment	p 17, 3.2.1	Low	Does not provide any details regarding storage facilities or accountability/security/inspection procedures that will be employed.
3.5.2 Failure Reporting, Analysis and Corrective Action System	p. 21, 3.3.6	Low	There is no mention of how the PQDR and the FRACAS will be integrated. No mention of quarterly failure reporting to the government.
3.5.3 Quality Management System	p. 21, 3.3.7	Low	No explicit mention of the Government's access to the quality management system. Proposal did not address access to the QMS using NMCI
3.6 Producibility	p 24, 3.4	Moderate	Proposal does not address activities at the PAC and SD, and Government review of production control, quality control, tooling, and inspection. Very skimpy response to requirements.
3.7.1 Safety Assessment Report	p 26, 3.5.1	High	Not completed and not intended to be completed until 30 days after contract award. If they don't pass, then what?
3.11 Testing Verification and Demonstration	p. 30, 3.9	Moderate	Proposal is a little vague in responding to request for a single all encompassing test plan. Does state "the test plan" and states "a cross-reference performance requirements verification report that verifies all requirements are met." A little vague on how the nonconformance of initial contract production articles would be handled. No mention of FIAR or FRACAS.

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<b>3.11.2 Assessment of Initial Contract Production Units</b>	p. 30, 3.9.2	Moderate	Does not adequately address the requirement to "demonstrate the adequacy and suitability of the contractor's production processes and procedures for achieving the requirements..." Offeror speaks to accomplishing the details relative to 810 F area, only. Lacking a provided comprehensive approach to achieving elements described in SOW 3.11.2 i.e. a track back to the Offerors PS within the context of CLIN 0001.
<b>3.11.2.1 Nonconformance of Initial Contract Production Units</b>	p. 30, 3.9.2.1	Low	FIAR and FRACAS not addressed in this paragraph of the proposal.
<b>3.11.5 Supportability Demonstration</b>	3.9.5 & Appendix F	Moderate	Proposal paragraph 3.9.5 does not specifically address how the SD will achieve the items/concerns listed in SOW paragraph 3.11.5 a thru h with the exception of 3.11.5 c.
<b>3.11.5.1 Supportability Demonstration Plan</b>	3.9.5	Medium	Proposed to conduct SD at a Marine Corps facility, which negates the collective benefits of SD, PAT, and AICPU.
<b>3.12.1 ILS Management Team Integrated Product Team</b>	p 33, 3.10.1	Moderate	Support Concept bullets list method of support as turning unit into the "RIP". This item will be a SAC 3 End item, not eligible for support by the Repairable Issue Points.
<b>3.13.3 Sustainment Level Maintenance</b>	3.11.3	Moderate	Stated that there are sustainment-level repairs required for the MRTB because of re-alignment issues.
<b>Appendix A, Performance Specification</b>	p. A1-1 to A1-12	Moderate	Missing the entire Section 4, 5, & 6 of PerfSpec. Verification column does not reflect how attributes will be verified. Document is in the wrong format.



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Appendix B, Training Materials	p. B-3 to B-60	Low	Very little covered in operators manual regarding maintenance, and nothing on troubleshooting. Training presentation does not show battery installation, reticle patterns, and other items from the operators manual which would be extremely important in providing operators the basic principles of the function of the system. Also, there is no operator maintenance or trouble shooting in the training materials. BIT test not covered in training materials.
Appendix E, Non-Priced CLS Analysis Format	p. E1-1 to E1-28	Low	Mount Plug repair and management stated at 6.23 hours on the surface appears excessive for the application of three screws, please clarify. Laser Mount Assy (9.87 Hrs) please clarify stated time to repair/ manage; on the surface appears excessive for the application of an assembly and alignment of the laser and display reticle. Stated repair (replacement?) and management times for the following assemblies appear excessive, please clarify: Eyepiece Assy. (6.56 Hrs), Objective Assy. (17.07 Hrs), Dust Plug Assy. Processor CCA (5.16 Hrs) (1.28 Hrs), Laser Cover Assy (1.42 Hrs), Rubber Focus Grip (2.45 Hrs), Battery Cover Assy. (2.59 Hrs), Battery Cover Assy. (2.59 Hrs), Battery Box Assy. (5.81 Hrs), Bottom Cover (6.37 Hrs), Interpupillary Knob Assy. (9.29 Hrs), Power Switch Assy. (8.03 Hrs), and Processor CCA (5.16 Hrs).

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## Technical Performance

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
None			
<b>Significant Strengths</b>			
<b>3.3.1.6.4 Laser System-On Notification.</b>		<b>5.2.4</b>	
Laser operation indicator	Laser operation and mode indicator	Has laser operation indicators. When laser is armed, text message in FOV indicates the operation mode. Also, additional cross hairs appear within the laser reticle when the laser is fired. (D-EOTF)	Low
<b>3.3.1.20 Start-up Time.</b>		<b>5.6.4</b>	
15 seconds	5 seconds	08B01: 3.5 ± 0.5 s. (T-EOTF)	Low
		08B02: 3.8 ± 0.5 s. (T-EOTF)	
<b>3.3.1.21.1 Battery Type.</b>		<b>5.2.16</b>	
In Marine Corps inventory	AA or CR123 rechargeable and non-rechargeable	Operates on either 3 DL123 or 2 L91 batteries, currently available in USMC inventory. Vendor supplied DL123 type batteries that were used for testing. (I-EOTF)	Low
<b>3.3.1.21.3 Vehicle Power Operation.</b>		<b>5.2.17</b>	
N/A	able to be powered from a vehicle with cable	Has accessory cable with NATO Slave connector which permits connection to vehicle power. The NATO Slave cable connects to a detachable external power cable (which can also be connected to adapter cable for wall power) for a combined length of > 12 ft. Separate soft case provided. (I-EOTF)	Low
<b>3.3.1.21.8 External Power.</b>		<b>5.2.19</b>	
N/A	115 VAC, 60 Hz power through Video/Data port	Has a detachable external power cable which can also be connected to AC/DC adapter cable (provided) for wall power. External power cable connects to imager via 19-pin multifunctional I/O port. (I-EOTF)	Low

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## Technical Performance

3.3.1.25.1 Adjustability Range.		5.7.5		Low
Adjustable for viewing in bright sunshine to total darkness	Range from no less than 0.1 foot-Lamberts to at least 23 foot-Lamberts	08B01: 0.10 ± 0.07 fL to 1360 ± 80 fL (95% CL). (T-EOTF)		
		08B02: 0.10 ± 0.01 fL to 1700 ± 300 fL (95% CL). (T-EOTF)		
Strengths				
3.3.1.1 Weight. (KPP)		5.2.1		Low
3.75 Lbs	2.5 Lbs	2.72 ±0.02 Lbs (with hand and neck straps). ( T-EOTF)		
3.3.1.3 Target Recognition. (KPP)		5.3.3		Low
1100 meters	2200 meters	1508 meters (ASEF c/o EOTF)		
3.3.1.10 Magnetic Compass.		5.2.7		Low
N/A	Has a magnetic compass	Has a magnetic compass. (D-EOTF)		
3.3.1.11.1 Still Image Capture and Download.		5.6.2		Moderate
N/A	Allows capture, storage, and download of images	Allows capture, storage, and download of images. Downloading of images is accomplished through USB port and requires installation of vendor-supplied software and drivers on a computer. (T-EOTF)		
3.3.1.13 Field of View.		5.7.2		Low
At least 8 degrees in wide FOV	25 degrees	08B01: 12.5° ± 0.5°. (T-EOTF)		
		08B02: 12.5° ± 0.5°. (T-EOTF)		
3.3.1.14 Diopter Adjustment.		5.2.8 & 5.7.3		Moderate
From -2 to +2	From -6 to +2	Has diopter adjustment on each eyepiece. (I-EOTF) Diopter values not measured by the EOTF.		
3.3.1.21.2 Battery Life.		5.6.5		Low
4 hours @ 32 degrees F	8 hours @ 32 degrees F	08B03: 5 hrs and 7 minutes @ 32 degrees F. (T-E- Labs c/o EOTF)		
3.3.1.21.6 Improper Battery Insertion Prevention.		5.2.18		Low
Informational	Physical	Informational- Has visible markings showing battery orientation on battery lid. (I-EOTF)		

**(b) (4) Technical Performance**

Significant Weaknesses			
3.3.1.17 Video and Data Output Connectivity.		5.2.13	High
Has video and data output connection(s)	N/A	Has <b>non-environmentally</b> sealed amphenol mini 19-pin video/data port which accommodates RS170, USB, and external power. Individual detachable power, USB, and power cables. (I-EOTF)	
		<b>Incident- 08B01</b> 19-pin connector socket became detached from the body when tester tried to connect with output cable. It is floating inside the unit. Unit is no longer sealed.	
Weaknesses			
3.3.1.6.1 Laser Pointer.		5.2.4	Moderate
IR laser pointer with training and operational modes	Threshold	IR laser pointer with training and operational modes. Also has a Class 3a (5 mW) visible laser pointer that is not disabled by blue blocker-type mechanism (screw). (D-EOTF)	
3.3.1.6.3 Laser Activation.		5.2.4	Moderate
Momentary on switch	Threshold	Laser is fired via independent momentary on switch (once laser is armed from selector switch on top of main body). Caution- there is a continuous-on mode that can be activated by double tapping the laser fire button. (D-EOTF)	
3.3.1.32.2 Objective Lens Protection.		5.2.22	Moderate
Retained protective objective lens cover	Threshold	Has retained thermally opaque objective lens cover. Lens cover can be replaced without tools. <b>Lens cover is flimsy and can easily contact lens.</b> (I-EOTF)	

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## Technical Performance

3.3.1.37.1 Image Quality.		5.3.2	Moderate
See Description	Threshold	08B01: Using collimated 4-bar image, there is a lens-induced distortion point in the center of eye eyepiece, but not really noticeable in normal operation. No perceivable flicker, obstructions, latency or waviness. Typical pattern of spatial noise or bright/dark pixels. CNR point is between 1.1 and 2.0 cy/mrad. (D&T- EOTF)	
		08B02: Using collimated 4-bar image, there is a lens-induced distortion point in the center of the left eyepiece, but not really noticeable in normal operation. No perceivable flicker, obstructions, latency or waviness. There is a column of bad pixels just to the right of center that is noticeable only when looking a objects of extreme contrast. Typical pattern of spatial noise or bright/dark pixels. CNR point is between 1.1 and 2.0 cy/mrad. (D&T- EOTF)	
		08B03: Using collimated 4-bar image, there is a lens-induced distortion point in the center of the both eyepieces, but not really noticeable in normal operation. No perceivable flicker, obstructions, latency or waviness. Typical pattern of spatial noise or bright/dark pixels. CNR point is between 1.1 and 2.0 cy/mrad. (D&T- EOTF)	



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## System Suitability

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
<b>3.5.4.1 Drop Shock.</b>		<b>5.4.8</b>	
1-meter drop onto hard packed earth	2-meter drop onto hard packed earth	<b>08B03:</b> Unit underwent a total of 6 drops onto 6 different faces, in accordance with MIL-STD-810F. Right eyepiece display shifted and scrambled after left-side drop (4th out of 6 drops from one meter). Consequent to front-end drop (6th), thermal image presentation completely lost and right eyepiece display blacked out. (T-EOTF)	<b>High</b>
<b>3.5.4.2 Immersion.</b>		<b>5.4.9</b>	
3 feet of seawater for 15 minutes	66 feet of seawater for 2 hours	<b>08B02:</b> Unit was immersed in tap water at a pressure equivalent to 3 ft of seawater for 15 minutes, then removed. Compressed button observed immediately after test, rendering the unit non-functional; it would not boot up. Button decompressed overnight, but unit still would not boot up and considerable condensation was observed on the interior surface of the eyepieces. <b>Note- unit not subjected to any environmental tests.</b> (T-EOTF)	<b>High</b>
<b>Significant Strengths</b>			
<b>3.3.1.26 Operation in an NBC Environment.</b>			
N/A	See description	Not evaluated by EOTF	<b>Moderate</b>
<b>3.3.1.27 Resistance to Decontamination Chemicals.</b>			
N/A	Resistant to standard decontamination chemicals	Not evaluated by EOTF	<b>Moderate</b>
<b>3.3.1.30 Noise Emissions.</b>		<b>LUE, p. 11</b>	
Not detectable by the unaided human ear beyond 10 meters (Threshold)	See description	The system exhibited an average noise detection distance of 6.3 meters.	<b>Moderate</b>

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## System Suitability

3.5.4.3 Temperature Range.		5.4.2	Moderate
From 0 °F to 120 °F	From -32 °F to 140 °F	08B03: Remained fully functional during and after test, and showed no external damage as a result of the temperature range. (T-E-Labs c/o EOTF)	
Strengths			
None			
Significant Weaknesses			
None			
Weaknesses			
3.3.1.22 System Adjustment Controls.		LUE, p. 12	Moderate
Distinctive, tactile, clearly-labeled controls	Threshold	3/7 operators favorably rated the positive tactile response of the system's controls. Operators noted that the system's buttons were hard to distinguish through feel. Training may provide risk mitigation.	
3.3.1.23 Ease of Use.		LUE, P. 12	Moderate
Easy to use. See definition.	Threshold	1/3 operators found the system easy to operate while wearing Nomex flame-resistant gloves.	
3.3.1.31 Light Emissions.		LUE, p. 11	Low
No visible light signature to the unaided eye	Threshold	The system exhibited an average light detection distance of 1.43 meters. Starcups were not included with the system during the UE.	



**(b) (4)****Production Readiness**

Technical Subject	Rating	Risk	Comment
1. Does the facility have a production line for the MRTB?	Weakness	Moderate	Vendor identified a production line that services three products. There is no mention of the amount or capacity of the production line, only that a production line exists. This potentially negates commerciality claim of the Offeror.
2. Does the facility have a production manager for the MRTB?	Acceptable	Low	
3. Has the manufacturer developed and approved MRTB drawings, system specifications, processes and other documentation necessary to produce the system? (Approved drawings and information will have either seals or signatures of approval.)	Weakness	Moderate	Lacks sufficient detail.
4. Has the manufacturer developed a bill-of-material (BOM) required for production of the MRTB? Inspect the BOM, quantities and deliveries and determine its adequacy to meet the production schedule and the delivery schedule.	Weakness	Moderate	Vendor provided no detail about the BOM.
5. Has the manufacturer identified any long lead items required for the manufacture of the MRTB?	Weakness	Moderate	Vendor lacks detail in identifying specific long-lead items.
6. Discuss the manufacturer's plans to acquire the necessary long-lead items. Do they have any in stock now?	Acceptable	Moderate	
7. Assess the manufacturer's materiel on hand to validate the start-up time for production. Is it adequate?	Strength	Low	Identifies parts on hand for validation of start-up time for production.

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## Production Readiness

8. Does the manufacturer have sufficient personnel on hand to produce the MRTB? What are the plans to ramp up production if a contract is awarded to the manufacturer?	Weakness	Moderate	Concerns about space in their lean production facility.
9. If the manufacturer waives privities of subcontracts, determine if the manufacturer has agreements with vendors of specialized components such as optical assemblies, thermal detector assemblies, shells and casings. Else, determine how the manufacturer will acquire these components.	Acceptable	Moderate	Some risk associated with the lack of detail provided.
10. Examine the manufacturer's quality assurance program. Do they have the necessary programs in place? Who will and how will they conduct required testing?	Acceptable	Low	

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Technical Subject	Proposal Claim Reference	Risk	Comment
<b>Deficiencies</b>			
3.12.4.7 Transportation		High	Not addressed in the proposal
<b>Significant Strengths</b>			
None			
<b>Strengths</b>			
3.4.1 Contractor Responsibilities	3.4.1 OASYS Responsibilities	Low	Concise, acknowledges deliverables and tells what format it will be using.
Appendix B, Delivery Schedule	Appendix D p.149	Low	Offeror proposes 12 month delivery schedule.
<b>Significant Weaknesses</b>			
3.5.3 Quality Management System	p. 18, 3.5.3	Moderate	This paragraph is simply cut and pasted from the RFP. More detail is needed to indicate the vendor's understanding of the requirement.
3.6 Producibility	p. 18, 3.6	Moderate	Vendor claims are repeats of the SOW text, and do not explain or propose how the vendor will accomplish the requirement, only that they acknowledge that the requirement exists.
Appendix E, Non-Priced CLS Analysis Format	p. 141 to 158	High	Proposal claims repairs take an extended timeframe. MTTR Requirement is 2 hours or less for 95% of field level maintenance tasks. All Block 3 entries state 100 MRTBs supported via CLS yet the Block 2 bulk parts qty's forecasted to support this level of CLS effort appear to coincide with the qty's which would support significantly fewer than 100 MRTBs.

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Weaknesses			
3.2.1 Program Management	p. 14, 3.2.1	Moderate	Program Management section is focused on the Quality Assurance aspects of the business and not on the program management practices for management of the program to include subcontractor control and data management.
3.2.2 Subcontractor Management	p. 14, 3.2.2	Low	
3.2.3 Data Management System	p. 14, 3.2.3	Low	General statement is included that offeror will execute the data management system as specified in the SOW, but no details are provided as to what system will be used or any type of specific experience the offeror may have in implementation of such a system.
3.2.3.1 Technical Proposal	p. 14, 3.2.3.1	Moderate	Proposal states any "Significant Changes" while the SOW states "any Changes"...Definition of "Significant" is arbitrary...it should not be included.
3.2.3.2 Schedule Planning	p. 14, 3.2.3.2	Low	Looking for the detail of HOW...certain program type, etc...
3.2.3.3 Assignment of Responsibility and Authority	p. 14, 3.2.3.3; p. 15, 3.2.3.3.1-6	Moderate	Offeror provided no assigned personnel for key billets, and no qualifications for the names presented.
3.2.3.3.1 Program Manager	p. 15, 3.2.3.3.1	Low	No information is provided about the Program Manager's experience. The Program Manager is not described as the primary point of contact between the offeror and the Government.
3.2.3.3.4 Integrated Logistics Support Manager	p. 15, 3.2.3.3.4	Low	This position being a key position should have been identified at this point in time.
3.2.3.3.6 Training Manager	p. 15, 3.2.3.3.6	Low	This position being a key position should have been identified at this point in time. Training Manager must meet the 3 year training experience requirement.
3.4.3 In-Process Review	p. 16, 3.4.3	Low	Use of the word "sufficient" is arbitrary...SOW states Govt can cancel or schedule any review...no mention of given "sufficient notice"



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3.4.4 Production Readiness Review	p. 16, 3.4.4	Low	The Government requires a Production Readiness Review (PRR), which is different from a Production Program Review.
3.5 Systems Engineering	p. 16, 3.5	Moderate	Vendor claims are repeats of the SOW text, and do not explain or propose how the vendor will accomplish the requirement, only that they acknowledge that the requirement exists. Also, Systems Engineering is not conducted in accordance with ISO 9001. This reference should be ISO14000.
3.5.1 Reliability and Maintainability Program	p. 17 3.5.1	Moderate	This response just mirrors the requirement section and does not provide information.
3.5.1.1 Procedures and Controls	p. 17, 3.5.1.1	Moderate	This response should describe the procedures and controls that are in place versus just saying "shall maintain procedures and controls." This statement cannot be evaluated.
3.5.1.2 Reliability Predictions	p. 17, 3.5.1.2	Moderate	Reliability Prediction data external to Tech Vol
3.7 Environment Safety and Occupational Health	p. 18, 3.7	Moderate	Vendor claims are repeats of the SOW text, and do not explain or propose how the vendor will accomplish the requirement, only that they acknowledge that the requirement exists.
3.7.1 Safety Assessment Report	p. 18 to 19, 3.7.1; Appendix G p. 178 to 183	Moderate	The SAR does not contain all of the hazards associated with their system.
3.7.1.1 Lithium Battery Safety Qualification	p. 19, 3.7.1.1	Moderate	Review of the lithium battery in the system is required by Carderock. Qualification is not the issue, but presenting the appropriate information for Carderock review is what is required.
3.7.2 Lasers	p. 19, 3.7.2	Moderate	The offeror needs to provide the compliance documentation versus just stating "they shall provide compliance documentation." The offeror needs to verify that the proper labeling is in place versus stating "shall verify that proper labeling is in place..." Visible laser has continuous mode.

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3.8 Configuration Management	p. 19, 3.8	Moderate	Offeror attests to an established parts management program yet provides no transparency as to it's elements. Vendor claims are repeats of the SOW text, and do not explain or propose how the vendor will accomplish the requirement, only that they acknowledge that the requirement exists.
3.10 Diminishing Manufacturing Sources and Material Supply	p. 22, 3.10	Low	Offeror fails to attest to DMSMS data progressively available to the Government across the life of the contract.
3.11 Testing Verification and Demonstration	p. 23, 3.11	Moderate	Vendor claims are repeats of the SOW text, and do not explain or propose how the vendor will accomplish the requirement, only that they acknowledge that the requirement exists.
3.11.2 Assessment of Initial Contract Production Units	p. 23, 3.11.2	High	Offeror fails to attest to the use of equipment and/or facilities not used to produce the MRTB or to conduct ATP.
3.11 Testing Verification and Demonstration	p. 24, 3.11.5.1; Appendix F p. 162 to 164	High	Focal Plane Array (FPA) calibration process normally requires the use of test solutions/support equipment when these components are removed and/or replaced in a system (PEI). The Government's requirement is to transition to full organic maintenance within one year.
3.11.5.2 Supportability Demonstration Test Report	p. 25, 3.11.5.2	Low	Describe the test report format and required content.
3.12 Integrated Logistics Support	p. 25, 3.12	Moderate	Vendor claims are repeats of the SOW text, and do not explain or propose how the vendor will accomplish the requirement, only that they acknowledge that the requirement exists.
3.13 Maintenance Planning	p. 28, 3.13	Moderate	Vendor claims are repeats of the SOW text, and do not explain or propose how the vendor will accomplish the requirement, only that they acknowledge that the requirement exists.

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3.16 Support Equipment	p. 31, 3.16	Moderate	Vendor claims are repeats of the SOW text, and do not explain or propose how the vendor will accomplish the requirement, only that they acknowledge that the requirement exists.
Appendix B, Training Materials	p. 64 to 103	Low	Vendor training materials contain only slides (no lesson plans), and do not provide any instructor text
Appendix B, Production Schedule	p.148	Low	Offeror proposes 12 month production schedule, but does not provide production details.
Appendix E, MRTB (System) & Part/Component Level Failure Data	p.159	Moderate	Offeror proposes severely unrealistic reliability data for components and system. There is a confusing reliability claim between 3000 and 10000 hrs (system).
Appendix F, MRTB Supportability Demonstration Test Plan	p. 162 to 164	Moderate	Proposed SD Test plan addresses SD tasks in very general terms, but fails to address the reporting architecture.
Appendix G, MRTB Safety Assessment Report	p. 178	Low	SAR not signed; failed to provide Military Laser Classification Exemption Request form.



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## Technical Performance

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
Deficiencies			
3.3.1.1 Weight. (KPP)		5.2.1	High
3.75 Lbs	2.5 Lbs	4.30 ± 0.02 Lbs (T-EOTF)	
3.3.1.3 Target Recognition. (KPP)		5.3.3	High
1100 meters	2200 meters	None of the bid samples would boot up on battery power. Not testable. (T-EOTF)	
3.3.1.4 Operational Use.			High
6 hours per 24 hour period, 2190 hours per year	Threshold	Not evaluated by EOTF	
3.3.1.5 Fields of View.		5.2.3	High
Digital wide and narrow FOVs	Optical wide and narrow FOVs	08F01: Optical wide, and narrow (2x) FOVs plus 2x digital zoom applied to optical narrow FOV. - Optical zoom faulty per vendor, and system does not power up. (D-EOTF)	
		08F02: Optical wide, and narrow (2x) FOVs plus 2x digital zoom applied to optical narrow FOV. - UUT did not power up.	
		08F02: Optical wide, and narrow (2x) FOVs plus 2x digital zoom applied to optical narrow FOV. - UUT did not power up.	
3.3.1.6.3 Laser Activation.		5.2.4	High
Momentary on switch	Threshold	System(s) would not boot up on battery power. Not testable. (T-EOTF)	
3.3.1.6.7 Laser Beam Divergence.		5.5.2	High
0.5 mrad (± 0.3 mrad)	Threshold	None of the bid samples would boot up on battery power, required for this test. Not testable. (T-EOTF)	
3.3.1.12 Focus Range.		5.7.1	High
10 meters to infinity	Threshold	None of the bid samples would boot up on battery power. Not testable. (T-EOTF)	
3.3.1.13 Field of View.		5.7.2	High
At least 8 degrees in wide FOV	25 degrees	None of the bid samples would boot up on battery power. Not testable. (T-EOTF)	

**(b) (4)****Technical Performance**

<b>3.3.1.16.1 System Adjustments.</b>		<b>5.2.10</b>	<b>High</b>
Polarity, brightness, and contrast directly accessible from level one of a menu system	... by individual and independent controls	None of the bid samples would boot up on battery power. Not testable. (D-EOTF)	
<b>3.3.1.16.2 Automatic Gain Control Override.</b>		<b>5.2.11</b>	<b>High</b>
Override of automatic gain control	Threshold	None of the bid samples would boot up on battery power. Not testable. (D-EOTF)	
<b>3.3.1.16.3 System Calibration.</b>		<b>5.2.12</b>	<b>High</b>
Manual calibration directly or from level one of a menu	Threshold	None of the bid samples would boot up on battery power. Not testable. (D-EOTF)	
<b>3.3.1.20 Start-up Time.</b>		<b>5.6.4</b>	<b>High</b>
15 seconds	5 seconds	None of the bid samples would boot up on battery power. Not testable. (T-EOTF)	
<b>3.3.1.21.2 Battery Life.</b>		<b>5.6.5</b>	<b>High</b>
4 hours @ 32 degrees F	8 hours @ 32 degrees F	08F03: Unit would not power up on vendor-supplied battery. Not testable. (T-E- Labs c/o EOTF)	
<b>3.3.1.21.4 Battery Indicator.</b>		<b>5.6.5</b>	<b>High</b>
Notification at 30 minutes remaining	Status bar with 30 minute indicator	None of the bid samples would boot up on battery power. Not testable. (T-EOTF)	
<b>3.3.1.21.6 Improper Battery Insertion Prevention.</b>		<b>5.2.18</b>	<b>Low</b>
Informational	Physical	No markings illustrating proper battery insertion or other physical means to prevent improper battery insertion are provided. (I-EOTF)	
<b>3.3.1.24 Harness.</b>		<b>5.2.20</b>	<b>Moderate</b>
Has a PALS harness	Threshold	Technical Volume claims coyote brown harness to be supplied, but none observed in packaging. Has black neck strap with no quick release feature. (I-EOTF)	
<b>3.3.1.25.1 Adjustability Range.</b>		<b>5.7.5</b>	<b>High</b>
Adjustable for viewing in bright sunshine to total darkness	Range from no less than 0.1 foot-Lamberts to at least 23 foot-Lamberts	None of the bid samples would boot up on battery power. Not testable. (T-EOTF)	
<b>3.3.1.25.2 Display Luminance Balance</b>		<b>5.7.6</b>	<b>High</b>
Eyepieces match each other to within 15%	N/A	None of the bid samples would boot up on battery power. Not testable. (T-EOTF)	

**(b) (4)****Technical Performance**

3.3.1.34 Carrying Case.		5.2.23	Moderate
Includes PALS soft carrying case	Threshold	Soft carrying case provided that can accommodate the imager, quick reference card, operator's manual, two sets of spare batteries, lens caps, eye cups, and cleaning materials. <b>Is not PALS compatible. Is green. (I-EOTF)</b>	
3.3.1.37.1 Image Quality.		5.3.2	High
See description	Threshold	None of the bid samples would boot up on battery power. Not testable. (T-EOTF)	
Significant Strengths			
3.3.1.6.4 Laser System-On Notification.		5.2.4	Moderate
Laser operation indicator	Laser operation and mode indicator	Has laser operation indicators. Laser is always armed in some mode of operation, indicated by symbol which is not intuitive (e.g. square or triangle). Additional symbol (square) appears when the laser is fired. (D-EOTF with wall power)	
3.3.1.7.2 Stadiametric Scales.		5.2.6	Low
N/A	Stadiametric scales for human and vehicle targets	Stadiametric scales present. Scales do not obscure the center of the FOV. (D-EOTF with wall power)	
3.3.1.14 Diopter Adjustment.		5.2.8 & 5.7.3	Moderate
From -2 to +2	From -6 to +2	Has diopter adjustment on each eyepiece. (I-EOTF) <b>Diopter values not measured by the EOTF.</b>	
3.3.1.18 Mil-Std 1913 Rail.		5.2.14	Low
N/A	Has a rail	Has Mil-Std-1913 rail integrated with the top surface. (I-EOTF)	
3.3.1.19 Tripod Interface.		5.2.15	Low
¼" x 20 threads per inch screw thread female socket	...located at the balance point	Has a female 1/4" x 20 socket located on the bottom, <b>and near balance point.</b> (I-EOTF)	
3.3.1.21.3 Vehicle Power Operation.		5.2.17	Low
N/A	able to be powered from a vehicle with cable	Has accessory cable with NATO Slave connector which permits connection to vehicle power. The NATO Slave cable connects to another cable with a "dummy" battery cartridge for attachment to UUT. The combined length of cables is > 12 ft. Separate soft case not provided. Connection to UUT could also be accomplished through 19-pin connector, but hardware was not provided. (I-EOTF)	

**(b) (4)****Technical Performance**

3.3.1.21.8 External Power.		5.2.19	Low
N/A	115 VAC, 60 Hz power through Video/Data port	Can be operated on wall power through AC/DC converter cable and a "dummy" battery cartridge lead for attachment to UUT. Connection to UUT could also be accomplished through 19-pin connector, but hardware is not provided. (I-EOTF)	
Strengths			
3.3.1.10 Magnetic Compass.		5.2.7	Low
N/A	Has a magnetic compass	Has a magnetic compass. (D-EOTF)	
3.3.1.36 Built-in Test.		5.2.24	Moderate
N/A	Has BIT	Technical Volume states that BIT is performed at system startup, continuously during operation, as well as on command through a menu function. BIT results are downloadable to a Windows-based computer. (I-EOTF) <b>However, none of the bid samples would boot up on battery power, so the capability could not be verified by demonstration.</b>	
Significant Weaknesses			
3.3.1.6.1 Laser Pointer.		5.2.4	High
IR laser pointer with training and operational modes	Threshold	IR laser pointer with training and "combat" modes. Laser always armed. User must be aware of laser symbology, which is not intuitive. There is no blue blocker-type mechanism. Demonstrated with wall power. (D-EOTF)	
3.3.1.6.2 Laser Reticle.		5.2.4 & 5.3.1	High
Laser Pointer Reticle	Threshold	Reticle on by default. Technical volume claims user can turn off, but could not be verified in the test, which called for operation by batteries. System would not boot up on battery power. (D-EOTF with wall power)	
3.3.1.15 Interpupillary Adjustment.		5.7.4	Moderate
59mm or narrower to 71mm or wider	Threshold	08F01: 55.2 ± 0.5 mm to 69.5 ± 0.5 mm. (T-EOTF) 08F02: 55.1 ± 0.5 mm to 70.8 ± 0.5 mm. (T-EOTF)	
3.3.1.29 Body Finish.		5.2.21	Moderate
Light reflections and glint are minimized	Threshold	Body is flat olive drab. Lens cap, eyecups and controls buttons are all flat black. Controls labeled with yellow printing. There is a lot of flat optical window surface on the front end of the unit. (I-EOTF)	

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**Technical Performance**

<b>Weaknesses</b>	
<b>None</b>	



**(b) (4) System Suitability**

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
<b>3.5.4.1 Drop Shock.</b>		<b>5.4.8</b>	
1-meter drop onto hard packed earth	2-meter drop onto hard packed earth	None of the bid samples would boot up on battery power for functional check. Not testable. (T-EOTF)	High
<b>3.5.4.2 Immersion.</b>		<b>5.4.9</b>	
3 feet of seawater for 15 minutes	66 feet of seawater for 2 hours	None of the bid samples would boot up on battery power for functional check. Not testable. (T-EOTF)	High
<b>3.5.4.3 Temperature Range.</b>		<b>5.4.2</b>	
From 0 °F to 120 °F	From -32 °F to 140 °F	None of the bid samples would boot up on battery power for functional check. Not testable. (T-EOTF)	High
<b>3.5.4.4 Temperature Shock.</b>		<b>5.4.3</b>	
From -32 °C to 50 °C	Threshold	None of the bid samples would boot up on battery power for functional check. Not testable. (T-EOTF)	High
<b>3.5.4.5 Salt Fog.</b>		<b>5.4.4</b>	
No damage	Threshold	None of the bid samples would boot up on battery power for functional check. Not testable. (T-EOTF)	High
<b>3.5.4.7 Altitude</b>		<b>5.4.6</b>	
Operate up to 15000 ft, storage up to 35,000 ft	Threshold	None of the bid samples would boot up on battery power for functional check. Not testable. (T-EOTF)	High
<b>Significant Strengths</b>			
<b>3.3.1.26 Operation in an NBC Environment.</b>			
N/A	See description	Not evaluated by EOTF	Moderate
<b>3.3.1.27 Resistance to Decontamination Chemicals.</b>			
N/A	Resistant to standard decontamination chemicals	Not evaluated by EOTF	Moderate

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**System Suitability**

<b>Strengths</b>	
None	
<b>Significant Weaknesses</b>	
None	
<b>Weaknesses</b>	
None	



(b) (4)

Production Readiness

Technical Subject	Rating	Risk	Comment
1. Does the facility have a production line for the MRTB?	Deficiency (note)	High	Vendor claims to have a production line, but then states it is for AN/PAS-22 and AN/PAS-25, and that MRTB is essentially the same. This is not shown by the bid sample, as it is a MARS unit that has been altered. <b>Contributes to a deficiency for production status as a commercial item.</b>
2. Does the facility have a production manager for the MRTB?	Weakness	Moderate	PMs are identified for both Merrimack NH, and Rehovot Israel facilities, however neither is currently overseeing any MRTB production.
3. Has the manufacturer developed and approved MRTB drawings, system specifications, processes and other documentation necessary to produce the system? (Approved drawings and information will have either seals or signatures of approval.)	Deficiency (note)	High	Vendor states that drawings are derivative of MARS product. Vendor claims that Drawing package is complete but at ELOP in Israel, awaiting export approval. Vendor claims drawings are not finalized. No drawings provided. <b>Contributes to a deficiency for production status as a commercial item.</b>
4. Has the manufacturer developed a bill-of-material (BOM) required for production of the MRTB? Inspect the BOM, quantities and deliveries and determine its adequacy to meet the production schedule and the delivery schedule.	Weakness	Moderate	Vendor states that BOM is available, but has not been provided it for inspection of quantities and deliveries.

(b) (4)

Production Readiness

5. Has the manufacturer identified any long lead items required for the manufacture of the MRTB?	Acceptable	Moderate	Vendor lists 11 part numbers for Long Lead Time Item List, but doesn't show supplier data for those parts.
6. Discuss the manufacturer's plans to acquire the necessary long-lead items. Do they have any in stock now?	Weakness	Moderate	Manufacturer details plan for acquisition or ordering of LLT items. Parts are not currently in stock.
7. Assess the manufacturer's materiel on hand to validate the start-up time for production. Is it adequate?	Weakness	High	Materials are not on hand to start production, with the exception of the IR Detector.
8. Does the manufacturer have sufficient personnel on hand to produce the MRTB? What are the plans to ramp up production if a contract is awarded to the manufacturer?	Weakness	Moderate	Manufacturer states they have trained personnel on hand, but in previous paragraph (answer to Production Capacity question), state they would have to go to multiple shifts in order to meet delivery quantities.
9. If the manufacturer waives privities of subcontracts, determine if the manufacturer has agreements with vendors of specialized components such as optical assemblies, thermal detector assemblies, shells and casings. Else, determine how the manufacturer will acquire these components.	Acceptable	Moderate	Manufacturer states that it is not their policy to waive their privities of subcontracts; however standard PMO progress reporting/status will be provided, which should be sufficient to support communication and insight to the program activities.
10. Examine the manufacturer's quality assurance program. Do they have the necessary programs in place? Who will and how will they conduct required testing?	Strength	Moderate	Manufacturer states in depth QC procedures are in place, and that all deliveries will undergo final acceptance QC at Merrimack NH facility.

(b) (4)

ILS

Technical Subject	Proposal Claim Reference	Risk	Comment
<b>Deficiencies</b>			
Appendix A, MIL-STD-810F Certification		High	Certification to be delivered after contract award. This was supposed to have been included with proposal.
Appendix B, Training Materials		High	No training materials were provided. Only included an operator's manual.
<b>Significant Strengths</b>			
None			
<b>Strengths</b>			
3.12.3.1	p. 39, 3.12.4	Low	Proposed BIT is very comprehensive.
3.15.4	p. 43, 3.15.4	Low	Utilizing past personnel and existing accepted manuals will provided a better product.
<b>Significant Weaknesses</b>			
3.2.3.3 Assignment of Responsibility and Authority	p. 25; 3.2.3.3	Moderate	Failed to identify qualifications of all required key billets
3.5.1.1	p. 27; 3.5.1	High	Offeror stated the sources of supply will be identified after the contract is awarded. None are know or identified at this time, negating the claim of "commercial item" IAW FAR 2.101.
3.12.3.1	p. 39, 3.12.4	Moderate	The Offeror fails to attest to providing a means for Marine Corps reps to readily notify the contractor of warranty failures 24/365.
3.12.3.1	p. 36, 3.12.4	Moderate	The excusable delays are too inclusive
Appendix D, Delivery Schedule	p. 18	High	Production is split 50/50 with ELOP Israel.
Appendix E, MRTB (System) & Part/Component Level Failure Data		High	MTBF data seems optimistic, at best, within the context of the viability of the three bid samples.

(b) (4) ILS

Weaknesses			
3.2.2 Subcontractor Management	p. 24; 3.2.2	Moderate	Subcontractor Management poorly explained. The concentration on subcontractor proposals vs. Quality Assurance is a moderate risk.
3.2.3 Data Management	p. 24; 3.2.3	Moderate	Poor explanation of DMS.
3.4.2 Post Award Conference	p. 26; 3.4.2	Moderate	Provided a poorly-worded explanation of the events required for the PAC. Did not write to the meeting requirements, and failed to provide detail.
3.4.3 In-Process Review	p. 26; 3.4.3	Moderate	In-process Review agenda was not proposed IAW the statement.
3.5.1	p. 27; 3.5.1	High	Described as an optional process; this is required IAW the statement of work.
3.5.1.2	p. 27; 3.5.1	Moderate	Reliability calculations are suspect and not supported by the facts (i.e. hokie)
3.5.2	p. 28; 3.5.3	Low	There is no mention of how the PQDR and the FRACAS will be integrated. Vendor FRACAS proposal relies on Vendor subcontractor tracking of reliability data
3.5.3	p. 28; 3.5.3	Moderate	Explanations of QM are totally inadequate. The opening statement is a treatise on Double-Speak.
3.6	p. 30, 3.6	Moderate	Offeror fails to provide a basic understanding of the producibility elements listed in the SOW.
3.7.2	p. 31, 3.7.2	Moderate	Foreign laser safety officer.
3.12 Integrated Logistics Support	n/a	Moderate	Offeror fails to attest to providing Summary/Price estimates per the SOW reference.
3.12.3	p. 36, 3.12.3	Low	The Offeror fails to provide a 2 year warranty IAW the SOW.
3.13	p. 41, 3.13	High	Few details on plan for transition to organic maintenance.
3.17 Training	3.17.1	Moderate	Assessments are provided based upon the offerors referenced AN/PAS-22 training development product deliverables and past performance management for this area of effort.



(b) (4)

ILS

Appendix E, Non-Priced CLS Analysis Format		Moderate	Repairs take an extended time period.
Appendix G, MRTB Safety Assessment Report	p. 54	Moderate	Not showing changes in residual risk with mitigating factors.
Appendix G, MRTB Safety Assessment Report	p. 54	Moderate	RAC changed two steps with only training as the mitigation.
Appendix G, MRTB Safety Assessment Report		Moderate	Germanium lens omitted from SAR.
Appendix G, MRTB Safety Assessment Report	p. 26	Moderate	Battery in MSDS in SAR is of different type than one listed in tech volume.
Appendix G, MRTB Safety Assessment Report	p. 32-33	Moderate	Laser warning labels were of the wrong type.
Appendix G, MRTB Safety Assessment Report	Annex F, p. 54-55	High	Laser design checklist was completed; however, system has not yet been developed.

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(Vendor G) for their MRTB640, reference (d), had no deficiencies as defined in reference (a) and received an overall adjectival rating of EXCELLENT with a risk rating of MODERATE in accordance with reference (a). On 9 October 2008, the SSAC presented its findings to the Source Selection Authority (SSA), making a recommendation for a competitive range consisting solely of Vendor G. A request for a Final Proposal Revision (FPR), reference (e), was sent to Vendor G on 12 November 2008 and the FPR, reference (f), was received on 21 November 2008.

The SSEB met on 25 November 2008 to review Vendor G's FPR, reference (f). The Vendor addressed all of the 18 weaknesses and six significant weaknesses expressed in reference (e). After a thorough analysis by members of the SSEB, the Vendor's FPR was found to have a total of four weaknesses, no significant weaknesses, and no deficiencies. Additionally, the Vendor was able to upgrade a significant weakness to a strength via their FPR response. A summary of the FPR review results is provided below.

A second request for FPR, reference (g), was sent to Vendor G on 17 December 2008 requesting additional detail relative to the test procedures in section 4 of the performance specification, Appendix A of the MRTB Request for Proposal, reference (b); this was one of the four remaining weaknesses. A revised FPR, reference (h), was received on 23 December 2008. The MRTB SSEB evaluated Vendor G's revised FPR, reference (h), in accordance with reference (a) and found this one weakness was adequately addressed. An overall summary of the review results from both the FPR and revised FPR, references (f) and (h), is provided below.

**3. FPR Review Results Summary**

**A. Elcan Optical Technologies MRTB640**

Testing and inspection of the Elcan Optical Technologies MRTB640 bid samples resulted in no deficiencies for technical performance or system suitability. A review of Elcan's MRTB640 FPR and revised FPR, references (f) and (h), resulted in no deficiencies for production readiness or ILS. Significant strengths, strengths, significant weaknesses, and weaknesses are outlined below, with all specific ratings and comments provided in enclosure (1). As a result of the findings, Elcan's MRTB640 proposal received an overall rating of Outstanding with a risk rating of Moderate as shown in the following table in accordance with reference (a).

	<b>Technical Performance</b>	<b>System Suitability</b>	<b>Production Readiness</b>	<b>ILS</b>	<b>Overall Rating</b>
<b>Technical Assessment</b>	Outstanding	Outstanding	Outstanding	Excellent	Outstanding
<b>Risk</b>	Moderate	Moderate	Low	Moderate	Moderate

- a. Technical Performance
  - i. Deficiencies

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- None Reported
- ii. Significant Strengths  
The system exhibited eleven Significant Strengths for Technical Performance as outlined in the Technical Performance table of enclosure (1).
- iii. Strengths  
The system exhibited six Strengths for Technical Performance as outlined in the Technical Performance table of enclosure (1).
- iv. Significant Weaknesses  
None Reported
- v. Weaknesses  
The system exhibited one Weakness for Technical Performance as outlined in the Technical Performance table of enclosure (1).
- b. System Suitability
  - i. Deficiencies  
None Reported
  - ii. Significant Strengths  
The system exhibited four Significant Strengths for System Suitability as outlined in the System Suitability table of enclosure (1).
  - iii. Strengths  
None Reported
  - iv. Significant Weaknesses  
None Reported
  - v. Weaknesses  
None Reported
- c. Production Readiness
  - i. Deficiencies  
None Reported
  - ii. Significant Strengths  
The proposal exhibited one Significant Strength for Production Readiness as outlined in items (3) of the Production Readiness table of enclosure (1).
  - iii. Strengths  
The proposal exhibited five Strengths for Production Readiness as outlined in items (1), (2), (4), (5), and (9) of the Production Readiness table of enclosure (1).
  - iv. Significant Weaknesses  
None Reported
  - v. Weaknesses  
None Reported
- d. Integrated Logistics Support (ILS)
  - i. Deficiencies  
None Reported
  - ii. Significant Strengths  
None Reported
  - iii. Strengths  
The proposal exhibited twelve Strengths for ILS as outlined in the ILS table of enclosure (1).



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iv. Significant Weaknesses

None Reported

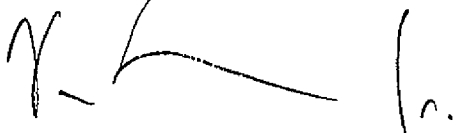
v. Weaknesses

The proposal exhibited two Weaknesses for ILS as outlined in the ILS table of enclosure (1).


4. Conclusion

The SSEB has achieved consensus, and believes the conclusions reached for the Offeror in the competitive range are in accordance with reference (a). It is the unanimous conclusion of the members of the MRTB SSEB that the FPR and bid sample submission from Vendor G, Elcan Optical Technologies (MRTB640) receive an overall adjectival rating of OUTSTANDING with a risk rating of MODERATE in accordance with reference (a), meeting the requirements of the solicitation reference (b).

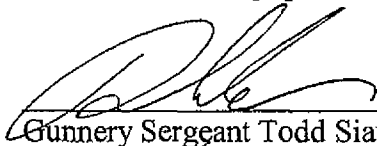
5. The following is a list of the members of the SSEB and their signatures verifying their concurrence with all data presented in this document.



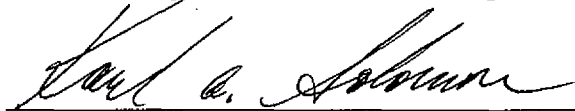
Mr. Verne Ashby, Logistician, PM ONS



Mr. Rex Baker, Equipment Specialist, PM ONS



Gunnery Sergeant Todd Siau, Training and Fielding Officer, PM ONS



Mr. Karl Solomon, Lead Engineer, PM ONS

Respectfully Submitted,



DR. JONATHAN D. CURLEY  
CHAIRMAN, MEDIUM RANGE THERMAL BI-OCULAR  
SOURCE SELECTION EVALUATION BOARD

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iv. Significant Weaknesses

None Reported

v. Weaknesses

The proposal exhibited two Weaknesses for ILS as outlined in the ILS table of enclosure (1).

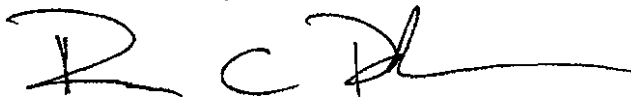
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5. The following is a list of the members of the SSEB and their signatures verifying their concurrence with all data presented in this document.

---

Mr. Verne Ashby, Logistician, PM ONS



---

Mr. Rex Baker, Equipment Specialist, PM ONS

---

Gunnery Sergeant Todd Siau, Training and Fielding Officer, PM ONS

---

Mr. Karl Solomon, Lead Engineer, PM ONS

Respectfully Submitted,

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CHAIRMAN, MEDIUM RANGE THERMAL BI-OCULAR  
SOURCE SELECTION EVALUATION BOARD

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PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
<b>Deficiencies</b>			
None			
<b>Significant Strengths</b>			
3.3.1.6.4 Laser System-On Notification.		5.2.4	
Laser operation indicator	Laser operation and mode indicator	Has laser operation indicators. When laser is armed, text message in FOV indicates the operation mode. Also, laser reticle collapses to center point when the laser is fired. Text message also indicates when laser is not armed. (D-EOTF)	Low
3.3.1.7.2 Stadiametric Scales.		5.2.6	
N/A	Stadiametric scales for human and vehicle targets	Stadiametric scales present. Scales do not obscure the center of the FOV. (D-EOTF)	Low
3.3.1.10 Magnetic Compass.		5.2.7	
N/A	Has a magnetic compass	Has a magnetic compass and inclinometer for azimuth , elevation and tilt. (D-EOTF)	Low
3.3.1.11.1 Still Image Capture and Download.		5.6.2	
N/A	Allows capture, storage, and download of images	Allows capture, storage, and download of images. Download of images is accomplished through USB port and does not require any proprietary software. Thumb drive can not be used for download, must download directly to computer. (T-EOTF)	Low
3.3.1.11.2 Video Capture and Download.		5.6.3	
N/A	Allow capture, storage, and download of video imagery	Allows capture, storage, and download of video. Download of video to computer is accomplished through USB port and requires standard MPEG4 player software to be installed on the computer. (T-EOTF)	Low
3.3.1.14 Diopter Adjustment.		5.2.8 & 5.7.3	
From -2 to +2	From -6 to +2	Has diopter adjustment on each eyepiece. (I-EOTF) Diopter values not measured by the EOTF.	Moderate

3.3.1.18 Mil-Std 1913 Rail.		5.2.14	Low
N/A	Has a rail	Detachable Mil-Std-1913 rail provided that attaches to the top of the unit through a protected (capped) interface. (I-EOTF)	
3.3.1.19 Tripod Interface.		5.2.15	Low
¼" x 20 threads per inch screw thread female socket	...located at the balance point	Has ¼" x 20 threads per inch screw thread female socket located close to the center of gravity (the balance point) on the bottom of the unit. (I-EOTF)	
3.3.1.21.1 Battery Type.		5.2.16	Low
In Marine Corps inventory	AA or CR123 rechargeable and non-rechargeable	Operates using four standard AA rechargeable or non-rechargeable batteries. Vendor supplied L-91 type lithium batteries that were used for testing. (I-EOTF)	
3.3.1.21.3 Vehicle Power Operation.		5.2.17	Low
N/A	able to be powered from a vehicle with cable	Has NATO Slave cable that connects to a multifunctional adaptor cable for connection to I/O port on UUT. The NATO Slave and multifunctional cable have a combined length >12ft. Separate soft carrying case provided. (I-EOTF)	
3.3.1.21.4 Battery Indicator.		5.6.5	Low
Notification at 30 minutes remaining	Status bar with 30 minute indicator	The MRTB640 shall display a battery status bar that continuously indicates the remaining battery life including a specific indication when 30 minutes of battery life remain. The indicator shall be located in the upper right corner of the system display and shall not interfere or obscure targets located in the central area of the scene.	
Strengths			
3.3.1.1 Weight. (KPP)		5.2.1	Low
3.75 Lbs	2.5 Lbs	3.54 ± 0.02 Lbs ( T-EOTF)	
3.3.1.3 Target Recognition. (KPP)		5.3.3	Low
1100 meters	2200 meters	2000 meters (ASEF c/o EOTF)	
3.3.1.13 Field of View.		5.7.2	Low
At least 8 degrees in wide FOV	25 degrees	08G02: 12.0° ± 0.5°. (T-EOTF)	
		08G03: 12.0° ± 0.5°. (T-EOTF)	
3.3.1.20 Start-up Time.		5.6.4	Low
15 seconds	5 seconds	08G01: 10.7 ± 0.5 s. (T-EOTF)	
		08G02: 12.5 ± 0.5 s. (T-EOTF)	

3.3.1.21.2 Battery Life.		5.6.5	Low
4 hours @ 32 degrees F	8 hours @ 32 degrees F	08G01: 6 hrs and 13 minutes @ 32 degrees F. (T-E- Labs c/o EOTF)	
3.3.1.25.1 Adjustability Range.		5.7.5	Low
Adjustable for viewing in bright sunshine to total darkness	Range from no less than 0.1 foot-Lamberts to at least 23 foot-Lamberts	08GA02: 0.6 ± 0.3 fL to 70 ± 30 fL (95% CL). (T-EOTF)	
		08G03: 0.6 ± 0.2 fL to 80 ± 2 fL (95% CL). (T-EOTF)	
Significant Weaknesses			
None			
Weaknesses			
3.3.1.6.1 Laser Pointer.		5.2.4	Moderate
IR laser pointer with training and operational modes	Threshold	IR laser pointer with training and operational modes. Operational mode precluded by blue blocker-type mechanism. (D-EOTF) Incident- 08G01.	
		Incident- 08G01: IR laser on this unit would not fire.	

PS-MRTB-001 Reference		Test Result Reference	Risk
Threshold	Objective		
Deficiencies			
None			
Significant Strengths			
3.3.1.26 Operation in an NBC Environment.		Not evaluated by EOTF	Moderate
N/A	See description		
3.3.1.27 Resistance to Decontamination Chemicals.		Not evaluated by EOTF	Moderate
N/A	Resistant to standard decontamination chemicals		
3.3.1.30 Noise Emissions.		LUE, p. 36	Moderate
Not detectable by the unaided human ear beyond 10 meters (Threshold)	See description	The system exhibited an average noise detection distance of 0 meters. No noise was detectable by the unaided human ear at any distance from the unit.	
3.5.4.3 Temperature Range.		5.4.2	Moderate
From 0 °F to 120 °F	From -32 °F to 140 °F	08G01: Remained fully functional during and after test, and showed no external damage as a result of the temperature range. (T-E-Labs c/o EOTF)	
Strengths			
None			

Significant Weaknesses	
None	
Weaknesses	
None	



Technical Subject	Rating	Risk	Comment
1. Does the facility have a production line for the MRTB?	Strength	Low	Commonality between the PhantomIR and the MRTB640 submission is such that this should be a smooth transition.
2. Does the facility have a production manager for the MRTB?	Strength	Low	27 years of production management experience
3. Has the manufacturer developed and approved MRTB drawings, system specifications, processes and other documentation necessary to produce the system? (Approved drawings and information will have either seals or signatures of approval.)	Significant Strength	Low	Vendor presented evidence of their drawing package for each component. Well organized and excellent presentation of data.
4. Has the manufacturer developed a bill-of-material (BOM) required for production of the MRTB? Inspect the BOM, quantities and deliveries and determine its adequacy to meet the production schedule and the delivery schedule.	Strength	Low	Vendor has comprehensive BOM with suppliers and, in some cases, secondary suppliers identified. Provided a production BOM.
5. Has the manufacturer identified any long lead items required for the manufacture of the MRTB?	Strength	Low	Vendor provided a matrix listing long lead items.
6. Discuss the manufacturer's plans to acquire the necessary long-lead items. Do they have any in stock now?	Acceptable	Moderate	The video capture CCA is listed as having a 24 week lead time, with zero in stock.
7. Assess the manufacturer's materiel on hand to validate the start-up time for production. Is it adequate?	Acceptable	Low	

8. Does the manufacturer have sufficient personnel on hand to produce the MRTB? What are the plans to ramp up production if a contract is awarded to the manufacturer?	Acceptable	Moderate	
9. If the manufacturer waives privities of subcontracts, determine if the manufacturer has agreements with vendors of specialized components such as optical assemblies, thermal detector assemblies, shells and casings. Else, determine how the manufacturer will acquire these components.	Strength	Low	
10. Examine the manufacturer's quality assurance program. Do they have the necessary programs in place? Who will and how will they conduct required testing?	Acceptable	Low	

Technical Subject	Proposal Claim Reference	Risk	Comment
<b>Deficiencies</b>			
None			
<b>Significant Strengths</b>			
None			
<b>Strengths</b>			
3.2.1 Program Management	p 14, 3.1.1 Program Management	Low	Clearly articulates PM's role/experience. Strong, experience program leadership will enhance the strength of the program.
3.2.3.3 Assignment of Responsibility and Authority	p. 17, 3.1.3.3	Low	All key members have upwards of 19 years of experience in their respective responsible areas.
3.2.3.3.1 Program Manager	p. 16, 3.1.3.3, Table 3-1	Low	Extensive experience and history managing thermal programs.
3.2.3.3.2 Systems Engineer	p. 16, 3.1.3.3, Table 3-1	Low	35 years of experience with EO systems. Six years as technical director for all uncooled thermal systems.
3.5.1.2 Reliability Predictions	p. 21, 3.3.5.2	Low	Use of heavily tested components; extensive shock testing of FPA.
3.5.4 Pre-Planned Product Improvement Program	p 23, 3.3.8 Pre-Planned P3I	Low	ECO and CLIC reference provides validity to their understanding of where the USMC is headed and what they need to be thinking about when it comes to their product's usefulness to the operating forces.
3.11.2.2	p 30/31 3.9.2.2 Production Refurbishment	Low	States 90 days after SD...Proposal claims 75 days.
3.12 Integrated Logistics Support	p. 46, 3.11	Moderate	Offeror fully attests to the full scope of the Government's requirement, include BIT.
3.12.4 Interim Contractor Logistics Support	p. 37, 3.10.3	Low	(200) PEIs & spares available as a rotatable ICLS pool to facilitate quickest turn around time. Clearly delineated ICLS repair processes across all applicable levels of effort for this are
Appendix A, MIL-STD-810F Certification	Appendix A	Low	Provided 3rd Party MIL-STD-810F verification.

Appendix D, Production Schedule	Appendix D p. D2-2	Low	Offeror proposes to meet the required 12 month production and delivery schedule.
Appendix D, Delivery Schedule	Appendix D p. D2-3	Low	Offeror proposes to meet the required 12 month production and delivery schedule.
<b>Significant Weaknesses</b>			
None			
<b>Weaknesses</b>			
3.7.1 Safety Assessment Report	p 26, 3.5.1	Moderate	Original: not completed and not intended to be completed until 30 days after contract award. If they don't pass, then what? From FPR: Offeror did not provide an answer to this weakness.
3.11.5 Supportability Demonstration	p. 33, 3.9.5 & Appendix F	Moderate	Original: proposal paragraph 3.9.5 does not specifically address how the SD will achieve the items/concerns listed in SOW paragraph 3.11.5 a thru h with the exception of 3.11.5 c. From FPR: SD plan still has references to the use of field service reps during the operations and sustainment phase. This increases risk and is outside the scope of the Government's requirement for full transition to Marine Corps organic maintenance. Must be addressed at the post award conference.