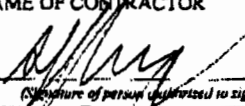



<b>AWARD/CONTRACT</b>		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING	PAGE OF PAGES 1   20
2. CONTRACT (Proc. Inst. Ident.) NO. HR0011-10-C-0180		3. EFFECTIVE DATE 19 Aug 2010		4. REQUISITION/PURCHASE REQUEST/PROJECT NO. Z30500	
5. ISSUED BY DARPA CNO ATTN: CHRISTOPHER GUSTA 3701 N. FAIRFAX DR. ARLINGTON VA 22203		CODE HR0011	6. ADMINISTERED BY (If other than Item 5)  <b>See Item 5</b>		CODE
7. NAME AND ADDRESS OF CONTRACTOR (No. street, city, county, state and zip code) M L B COMPANY 2651 CASEY AVE STE B MOUNTAIN VIEW CA 94043-1138			8. DELIVERY [ ] FOB ORIGIN [X] OTHER (See below)		9. DISCOUNT FOR PROMPT PAYMENT
10. SUBMIT INVOICES 1 (1 copies unless otherwise specified) TO THE ADDRESS SHOWN IN: <b>Section G</b>			11. SHIP TO/MARK FOR APRLRBA DR. CARL TILMANN 2130 8TH STREET BLDG 4E, ROOM 261 WPAFB OH 45433-7542		
12. PAYMENT WILL BE MADE BY DFAB INDIANAPOLIS CENTER VENDOR PAY OFFICE - INDIANAPOLIS 8800 E. 86TH STREET INDIANAPOLIS IN 46249			13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: [ ] 10 U.S.C. 2304(c) [ ] 41 U.S.C. 253(c)		
14. ACCOUNTING AND APPROPRIATION DATA <b>See Schedule</b>			15. TOTAL AMOUNT OF CONTRACT <b>\$369,677.00</b>		
16. TABLE OF CONTENTS					
(X) SEC.	DESCRIPTION	PAGE(S)	(X) SEC.	DESCRIPTION	PAGE(S)
<b>PART I - THE SCHEDULE</b>			<b>PART II - CONTRACT CLAUSES</b>		
X A	SOLICITATION/ CONTRACT FORM	1	X I	CONTRACT CLAUSES	17 - 20
X B	SUPPLIES OR SERVICES AND PRICES/ COSTS	2 - 4	<b>PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS</b>		
X C	DESCRIPTION/ SPECS./ WORK STATEMENT	5 - 7	X J	LIST OF ATTACHMENTS	20
X D	PACKAGING AND MARKING	B	<b>PART IV - REPRESENTATIONS AND INSTRUCTIONS</b>		
X E	INSPECTION AND ACCEPTANCE	9	K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFBROS	
X F	DELIVERIES OR PERFORMANCE	10 - 11	L	INSTRS., CONDS., AND NOTICES TO OFFERORS	
X G	CONTRACT ADMINISTRATION DATA	12 - 13	M	EVALUATION FACTORS FOR AWARD	
X H	SPECIAL CONTRACT REQUIREMENTS	14 - 16			
<b>CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE</b>					
17. (X) CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return it to issuing office.) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)			18. ( ) AWARD (Contractor is not required to sign this document.) Your offer on Solicitation Number including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your offer, and (b) this award/contract. No further contractual document is necessary.		
19A. NAME AND TITLE OF SIGNER (Type or print) <b>STEPHEN M DRERIS PRESIDENT M L B Co.</b>		20A. NAME OF CONTRACTING OFFICER <b>CHRISTOPHER L. GLISTA</b>		21. TEL: (571) 218-4405 EMAIL: christopher.glista@darpa.mil	
19B. NAME OF CONTRACTOR		19C. DATE SIGNED <b>8-18-10</b>		20B. UNITED STATES OF AMERICA	
BY  (Signature of person authorized to sign)		20C. DATE SIGNED <b>8/19/10</b>		20D.  (Signature of Contracting Officer)	

## Section B - Supplies or Services and Prices

<u>CONTRACT LINE ITEM NO. (CLIN)</u>	<u>SUPPLIES/SERVICES</u>	<u>QTY</u>	<u>UNIT</u>	<u>UNIT PRICE</u>	<u>AMOUNT</u>
0001	The Contractor shall perform the "Precision Emplacement of Small Payloads from V-BAT Aircraft" effort in accordance with Attachment No. 1 - Statement of Work, and Section C-1 of the Contract.  Kickoff meeting presentation materials, and R&D status and progress report for Month 1	1	Lot	\$23,000.00	\$23,000.00
000101	Funding for CLIN 0001 AO No. Z305/00 ACRN AA: \$23,000.00				
0002	Requirements document, and R&D status and progress report for Month 2.	1	Lot	\$21,000.00	\$21,000.00
000201	Funding for CLIN 0002 AO No. Z305/00 ACRN AA: \$21,000.00				
0003	Prototype hardware and design documentation. R&D status and progress report for Month 3.	1	Lot	\$40,000.00	\$40,000.00
000301	Funding for CLIN 0003 AO No. Z305/00 ACRN AA\$40,000.00				
0004	Design documentation, and R&D status and progress report for Month 4.	1	Lot	\$60,000.00	\$60,000.00

000401	Funding for CLIN 000401 AO No. Z305/00 ACRN AA: \$60,000.00				
0005	Report on integration of vision control with V-Bat control system. Report on alternate attachment study. R&D status and progress reports for Month 5 and Month 6.	1	Lot	\$37,000.00	\$37,000.00
000501	Funding for CLIN 0005 AO No. Z305/00 ACRN AA\$37,000.00				
0006	Video of flight test of V-Bat with arm extended. Interim report on design of vision system for precision emplacement. R&D status and progress reports for Month 7 and Month 8.	1	Lot	\$58,000.00	\$58,000.00
000601	Funding for CLIN 0006 AO No. Z305/00 ACRN AA: \$58,000.00				
0007	Report on development options for future vision systems. Plan for future work. R&D status and progress report for Month 9.	1	Lot	\$40,000.00	\$40,000.00
000701	Funding for CLIN 0007 AO No. Z305/00 ACRN AA: \$40,000.00				

0008	Design documentation, video of manipulator arm response to vision control system. R&D status and progress reports for Month 10 and Month 11.	1	Lot	\$50,000.00	\$50,000.00
000801	Funding for CLIN 0008 AO No. Z305/00 ACRN AA: \$50,000.00				
0009	Video of precision emplacement flight test. Final briefing and report.	1	Lot	\$40,677.00	\$40,677.00
000901	Funding for CLIN 0009 AO No. Z305/00 ACRN AA: \$40,677.00				

Section C - Descriptions and Specifications

CLAUSES INCORPORATED BY FULL TEXT

C-1 Scope of Work

(a) The Contractor shall furnish the necessary personnel, materials, facilities and other services as may be required to perform Contract Line Item Numbers (CLINs) 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, and 0009 in accordance with the Statement of Work entitled, "Precision Emplacement of Small Payloads from V-Bat Aircraft Study." A copy of the Statement of Work is incorporated into the Contract as Attachment No. 1.

C-2 Reports and Other Deliverables

(a) The Contractor shall submit the following reports and other deliverables in accordance with the delivery schedule set forth in Section F. Reports and other deliverables shall be submitted in writing, as defined in FAR 2.101, or as specified below:

(1) R&D STATUS AND PROGRESS REPORT. This brief narrative, not to exceed five pages in length, shall contain the following:

- (i) For first report only; the date work actually started.
- (ii) Description of progress during the reporting period, supported by reasons for any change in approach reported previously
- (iii) Planned activities and milestones for the next reporting period.
- (iv) Description of any major items of experimental or special equipment purchased or constructed during the reporting period.
- (v) Notification of any changes in key personnel associated with the contract during the reporting period.
- (vi) Summary of substantive information derived from noteworthy trips, meetings, and special conferences held in connection with the contract during the reporting period.
- (vii) Summary of all problems or areas of concern.
- (viii) Related accomplishments since last report.
- (ix) Fiscal status, to include reporting of summary level financial data in the following format:

R&D STATUS AND PROGRESS REPORT  
PROGRAM FINANCIAL STATUS

Work Breakdown		Cumulative to Date			At Completion	
Structure or Task Element	Planned Expend	Actual Expend	% Budget Compl	At Compl	Latest Revised Estimate	Remarks

Subtotal: \_\_\_\_\_

Management Reserve: \_\_\_\_\_

Or Unallocated Resources: \_\_\_\_\_

TOTAL: \_\_\_\_\_

=====

Note: Budget at completion changes only with the amount of any scope changes. (Not affected by underrun or overrun)

Based on currently authorized work:

Is current funding sufficient for the current fiscal year (FY)? (Explain in narrative if "NO")  
 YES NO

What is the next FY funding requirement at current anticipated levels?  
 \$ \_\_\_\_\_

Have you included in the report narrative any explanation of the above data and are they cross-referenced?  
 YES NO

(2) FINAL REPORT. The Contractor shall deliver a final report upon completion of the Contract. Title pages shall include a disclaimer worded substantially as follows:

"The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies, either expressly or implied, of the Defense Advanced Research Projects Agency or the U.S. Government."

The Final Report summary shall include:

Task Objectives  
 Technical Problems  
 General Methodology (i.e., literature review, laboratory experiments, surveys, etc.)  
 Technical Results  
 Important Findings and Conclusions  
 Significant Hardware Development  
 Special Comments  
 Implications for Further Research  
 Standard Form 298, August 1998

(3) ADDITIONAL MISCELLANEOUS DATA DELIVERABLES. The Contractor shall also deliver those items listed in the Contract Attachment No. 1 - Statement of Work, as applicable. The Contractor shall adhere to the schedule, as applicable, contained in the Statement of Work. Presentation materials (hard and soft copy) for all briefings given to the Government shall be provided in the Contractor's format.

(b) Reports delivered by the Contractor in the performance of the Contract shall be considered "Technical Data" as defined in Section I Contract clauses entitled "Rights in Technical Data - Noncommercial Items" and "Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation."

(c) Bulky reports shall be mailed by other than first-class mail unless the urgency of submission requires use of first-class mail. In this situation, one copy shall be mailed first-class and the remaining copies forwarded by less than first-class.

(d) All papers and articles published as a result of DARPA sponsored research shall include a statement reflecting the sponsorship. In addition, a bibliography of the titles and authors of all such papers are to be included in the Final Technical Report

(1) The cover or title page of each of the above reports or publications shall have the following citation:

Sponsored by

Defense Advanced Research Projects Agency

Tactical Technology Office (TTO)

Program: Precision Emplacement of Small Payloads from V-Bat Aircraft Study

Issued by DARPA/CMO under Contract No. HR0011-10-C-0180

- (2) The title page shall include a disclaimer worded substantially as follows:

“The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies, either expressly or implied, of the Defense Advanced Research Projects Agency or the U.S. Government.”

- (3) The final technical report must (i) be prepared in accordance with American National Standards Institute (ANSI) Standard Z39.18; (ii) include a Standard Form 298, August 1998; and (iii) be marked with an appropriate Distribution Statement.

- (4) Distribution Statement B applies. “Distribution authorized to U.S. Government agencies only due to the inclusion of proprietary information and to prevent Premature Dissemination of potentially critical technological information. Other requests for this document shall be referred to DARPA Technical Office via email at [prc@darpa.mil](mailto:prc@darpa.mil).”

*Note to Contractor: In accordance with the applicable Data Rights clauses(s), all proprietary information within the data deliverables shall be clearly identified/marked as such for each such occurrence (use of footnotes, or similar forms of reference, for purposes of such identification is encouraged).*

Section D - Packaging and Marking

CLAUSES INCORPORATED BY FULL TEXT

D-1 Packaging and Marking

(a) All items shall be preserved, packaged, packed and marked in accordance with best commercial practices to meet the packing requirements of the carrier, and to ensure safe delivery at destination.



Section E - Inspection and Acceptance

CLAUSES INCORPORATED BY REFERENCE

52.246-9	Inspection Of Research And Development (Short Form)	APR 1984
252.246-7000	Material Inspection And Receiving Report	MAR 2008

CLAUSES INCORPORATED BY FULL TEXT

E-1 Inspection and Acceptance

(a) Supplies/services will be inspected/accepted at destination by the Contracting Officer's Representative identified in Section G herein.

(b) Use of the DD 250 is required for submission of the Final Report only.

## Section F - Deliveries or Performance

## CLAUSES INCORPORATED BY REFERENCE

52.247-34 F.O.B. Destination

NOV 1991

## CLAUSES INCORPORATED BY FULL TEXT

F-1 Term of Contract

(a) The term of the basic Contract (i.e., CLINs 0001, 0002, 0003, 0004, 0005, 0006, 0007, 0008, and 0009) commences on August 19, 2010 and continues through August 18, 2011.

F-2 Reports and Other Deliverables

Delivery of all reports and other deliverables shall be made to the addressee specified in F-3 entitled "Report Distribution" in accordance with the following:

<u>Description</u>	<u>Due Date</u>
R&D Status and Progress Report	On a monthly basis, within seven (7) days after the end of the previous reporting month
Final Report	Upon completion of the basic Contract
Additional Miscellaneous Data Deliverables	See Attachment No. 1 - Statement of Work

F-3 Report Distribution

- (a) DARPA/Tactical Technology Office (TTO)  
ATTN: George Root  
3701 North Fairfax Drive  
Arlington, VA 22203-1714  
Email: george.root@darpa.mil  
(one copy of every report and deliverable)
- (b) DARPA/Tactical Technology Office (TTO)  
ATTN: Assistant Director, Program Management (ADPM)  
3701 North Fairfax Drive  
Arlington, VA 22203-1714  
Email: adpm-tto@darpa.mil  
(one copy of the R&D Status Reports and Final Report)
- (c) Dr. Carl P. Tilmann, Contracting Officer's Representative  
Computational Aerophysics Branch  
Air Vehicles Directorate, Air Force Research Laboratory  
AFRL/RBAC, Bldg 146, Room 225  
2210 8th Street, WPAFB, OH 45433-7542  
Email: Carl.Tilmann@wpafb.af.mil  
(one copy of every report and deliverable)

- (d) DARPA/Research Services  
3701 North Fairfax Drive  
Arlington, VA 22203-1714  
Email: ResearchServices@darpa.mil  
(one copy of the Final Report)
  
- (e) Defense Technical Information Center
  - (1) Email: TR@dtic.mil  
(one electronic copy of the Final Report, if unclassified)  
OR
  - (2) Attn: DTIC-BCS  
8725 John J. Kingman Road, Suite 0944  
Fort Belvoir, VA 22060-0944  
(two hard copies of the Final Report, if unclassified)
  
- (f) DARPA/Contracts Management Office (CMO)  
ATTN: Christopher L. Glista  
3701 North Fairfax Drive  
Arlington, VA 22203-1714  
Email: reportscg@darpa.mil  
(one copy of the R&D Status Reports and Final Report)

Note 1: (a) through (f) – submissions of unclassified materials only. Submission of classified material shall be coordinated through DARPA/Security & Intelligence Directorate (SID) and/or George Root, DARPA Program Manager, in accordance with the DD 254, as applicable.

Note 2: For the Final Technical Report(s), the Contractor must also comply with the distribution requirements of DFARS 252-235-7011, as applicable.

F-4 Notice Regarding Late Delivery

In the event the Contractor anticipates difficulty in complying with the Contract delivery schedule, the Contractor shall immediately notify the Contracting Officer in writing, giving pertinent details, including the date by which it expects to make delivery; PROVIDED, however, that this date shall be informational only in character and the receipt thereof shall not be construed as a waiver by the Government of any contract delivery schedule, or any rights or remedies provided by law or under this Contract.

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

ACRN AA 9700400 1320 Z305 POC40 2525 DPAC 0 5476 S12136 63286E \$369,677.00  
(ARPA Order No. Z305/00)

CLAUSES INCORPORATED BY FULL TEXT

G-1 Procuring Office Representative/Contracting Officer

(a) The Procuring Office Representative/Contracting Officer is Christopher L. Glista, DARPA/CMO, 3701 North Fairfax Drive, Arlington, VA 22203-1714, telephone: (571) 218-4405, and E-mail: christopher.glista@darpa.mil.

(b) Notwithstanding any other provision of this contract, the Contracting Officer is the only individual authorized to redirect the effort or in any way amend or modify any of the terms of this contract. If, as a result of technical discussions, it is desirable to alter contract obligations or statement of work, a modification must be issued in writing and signed by the Contracting Officer.

G-2 Electronic Submission of Payment Requests

(a) Invoices for goods received or services rendered under this contract shall be submitted electronically through Wide Area Work Flow – Receipt and Acceptance (WAWF):

(1) Vendors that have never used WAWF shall follow the directions in the WAWF Vendor Getting Started Guide available at the following website: <http://www.dfas.mil/contractorpay/electroniccommerce/wideareaworkflow.html>. This website also contains links for Vendor training and practice. Additional support can be obtained by calling WAWF Customer Service at 866-618-5988.

(2) Back up documentation (such as timesheets, monthly status reports, etc.) can be included and attached to the invoice in WAWF. Attachments should be in PDF format, but Attachments created in any Microsoft Office product may be attached. Total limit for the size of files per invoice is 5 megabytes.

(b) The following information, regarding invoice routing DoDAAC's, must be entered for completion of the invoice in WAWF:

WAWF Invoice Type	Select 2-in-1 for FFP Actions
Issuing Office DoDAAC	HR0011
Admin Office DoDAAC	HR0011
Service Approver DoDAAC	HR0011, Extension 08
DCAA Office DoDAAC (Used on Cost Vouchers only)	N/A
Paying Office DoDAAC	HQ0347

(c) For each invoice/cost voucher submitted for payment, the contractor shall also e-mail the WAWF automated invoice notice directly to the following points of contact:

Name	E-mail	Phone	Role
Carl P. Tilmann	Carl.Tilmann@wpafb.af.mil	(937)255-4077	COR
Christopher L. Glista	Christopher.glista@darpa.mil	(571) 218-4405	Contracting Officer

G-3 Delegation of Authority for Contract Administration

*Reserved.*

G-4 Contracting Officer's Representative (COR)

(a) Performance of work under this contract shall be subject to the technical direction of Dr. Carl P. Tilmann, Computational Aerophysics Branch, Air Vehicles Directorate, Air Force Research Laboratory, AFRL/RBAC, Bldg 146, Room 225, 2210 8th Street, WPAFB, OH 45433-7542; Email: Carl.Tilmann@wpafb.af.mil. Such technical direction includes those instructions to the Contractor necessary to accomplish the Statement of Work. The COR is not otherwise authorized to make any representations or commitments of any kind on behalf of the Contracting Officer or the Government. The COR does not have the authority to alter the Contractor's obligations or to change the specifications of the contract.

(b) Technical direction shall not include any direction which:

- (1) Constitutes additional work outside the scope of work;
- (2) Constitutes a change as defined in Section I contract clause entitled "Changes";
- (3) In any manner causes an increase or decrease in the total estimated cost or the time required for contract performance; or
- (4) Changes any of the stated terms, conditions, or specifications of the contract.

(c) A copy of the Contracting Officer's Representative designation memorandum is incorporated into the Contract as Attachment No. 2.

G-5 Payment Instructions for Multiple Accounting Classification Citations

(a) If there is more than one ACRN within a contract line item, the payment office will make payment using the oldest fiscal year appropriations first, exhausting all funds in the previous fiscal year before disbursing from the next fiscal year. In the event there is more than one ACRN associated with the same fiscal year, the payment amount shall be disbursed from each ACRN within a fiscal year in the same proportion as the amount of funding obligated for each ACRN within the fiscal year.

G-6 Incremental Funding

(a) The Contract is fully funded.

G-7 Payment of Cost and Fee

(a) As consideration for the proper performance of work required under this contract, the Contractor shall be paid as follows:

(1) Costs, as provided for under Section I contract clause titled "Allowable Cost and Payment" not to exceed the amount set forth as "Total Estimated Cost" in Section B, and subject further to those Section I clauses entitled "Limitation of Cost" or "Limitation of Funds".

(2) A fixed fee in the amount set forth as "Fixed Fee" in Section B, in accordance with the Section I contract clause entitled "Fixed Fee". The Contractor may bill on each invoice the amount of the fixed fee bearing the same percentage to the total fixed fee as the amount of cost billed bears to the total estimated cost.

## Section H - Special Contract Requirements

## CLAUSES INCORPORATED BY FULL TEXT

H-1 Type of Contract

(a) This is a Firm Fixed Price contract.

H-2 Public Release or Dissemination of Information

(a) At this time, DARPA expects the work performed under this contract will NOT be fundamental research, and it is, therefore, subject to the following publication restrictions:

There shall be no dissemination or publication, except within and between the Contractor and any subcontractors, of information developed under this contract or contained in the reports to be furnished pursuant to this contract without prior written approval, which will be communicated to the Contractor by email through the DARPA Public Release Center (PRC) at PRC@darpa.mil. All technical reports will be given proper review by appropriate authority to determine which Distribution Statement is to be applied prior to the initial distribution of these reports by the Contractor. These restrictions must be flowed down to all subcontractors. Any publications shall incorporate an Acknowledgement of Support and Disclaimer in accordance with DFARs 252.235-7010.

(b) When submitting material for written approval for open publication as described in subparagraph (a) above, the Contractor must submit a request for public release request to the PRC and include the following information: 1) Document Information: document title, document author, short plain-language description of technology discussed in the material (approx 30 words), number of pages (or minutes of video) and document type (briefing, report, abstract, article, or paper); 2) Event Information: event type (conference, principle investigator meeting, article or paper), event date, desired date for DARPA's approval; 3) DARPA Sponsor: DARPA Program Manager, DARPA office, and contract number; and 4) Contractor's Information: POC name, e-mail and phone. Allow four weeks for processing; due dates under four weeks require a justification. Unusual electronic file formats may require additional processing time. Requests can be sent either via e-mail to PRC@darpa.mil or via hard copy to 3701 North Fairfax Drive, Arlington VA 22203-1714, telephone (571) 218-4235. Refer to www.darpa.mil/prc for information about DARPA's public release process.

H-3 Key Personnel

(a) The Contractor shall notify the Contracting Officer prior to making any change in key personnel. Key personnel are defined as follows:

(b)(4)



(b) The Contractor must demonstrate that the qualifications of the prospective personnel are equal to or better than the qualifications of the personnel being replaced. Notwithstanding any of the foregoing provisions, key personnel shall be furnished unless the Contractor has demonstrated to the satisfaction of the COR that the qualifications of the proposed substitute personnel are equal to or better than the qualifications of the personnel being replaced.

H-4 Restrictions on Printing

(a) Unless otherwise authorized in writing by the Contracting Officer, reports, data, or other written material produced using funds provided by this contract and submitted hereunder shall be reproduced only by duplicating processes and shall not exceed 5,000 single page reports or a total of 25,000 pages of a multiple-page

report. These restrictions do not preclude the writing, editing, preparation of manuscript or reproducible copy of related illustrative materials if required as part of this contract, or incidental printing such as forms or materials necessary to be used by the Contractor to respond to the terms of the contract.

#### H-5 Invention Disclosure and Reports

(a) All written communications required by DFARS clause 52.227-11, "Patent Rights - Ownership by the Contractor (Dec 2007)" shall be submitted to the Administrative Contracting Officer (ACO). All required reporting shall be accomplished using the i-Edison.gov reporting website: <https://s-edison.info.nih.gov/iEdison/>.

#### H-6 Contractor Representations and Certifications

(a) The Contractor's Representations and Certifications dated July 22, 2010 and a copy of the Contractor's Online Representations and Certifications (ORCA) effective from July 21, 2010 through July 21, 2011 are incorporated herein by reference.

#### H-7 Insurance Schedule

(a) The Contractor shall maintain the types of insurance listed in FAR 28.307-2 (a), (b) and (c), with the minimum amounts of liability indicated therein. The types of insurance coverage listed in paragraphs (d) and (e) shall also be maintained when applicable.

#### H-8 Travel

(a) In connection with direct charge to the contract of travel-related expenses, the Contractor shall hold travel to the minimum required to meet the objectives of the contract, and substantial deviations from the amount of travel agreed to during contract negotiation shall not be made without the authorization of the Contracting Officer.

When applicable, the Contractor shall notify the COR of proposed travel of an employee beyond that agreed to during negotiations.

(b) Approval of the Contracting Officer shall be obtained in advance for attendance by personnel at training courses, seminars, and other meetings not directly related to contract performance if the costs for the courses, seminars, and other meetings are charged to the contract.

(c) All foreign travel shall be authorized and approved in advance, in writing, by the Contracting Officer. Request for such travel must be submitted to the Contracting Officer at least thirty (30) days in advance of traveler's anticipated departure date, and shall include traveler's itinerary of United States Flag Air Carriers.

#### H-9 Metric System

(a) The Defense Advanced Research Projects Agency (DARPA) will consider the use of the metric system in all of its activities consistent with operational, economical, technical and safety requirements.

(b) The metric system will be considered for use in all new designs. When it is deemed not to be in the best interest of the DoD to provide metric design, justification shall be provided.

(c) Physical and operational interfaces between metric items and U.S. customary items will be designed to assure that interchangeability and interoperability will not be affected.

(d) Existing designs dimensioned in U.S. customary units will be converted to metric units only if determined to be necessary or advantageous. Unnecessary retrofit of existing systems with new metric components will be avoided where both the new metric and existing units are interchangeable and interoperable. Normally, the system of measurement in which an item is originally designed will be retained for the life of the item.

(e) During the metric transition phase hybrid metric and U.S. customary designs will be necessary and acceptable. Material components, parts, subassemblies, and semi-fabricated material, which are of adequate or when it is otherwise specifically determined to be in the best interest of the Department of Defense. Bulk materials will be specified and accepted in metric units when it is expedient or economical to do so.

(f) Technical reports, studies, and position papers, (except those pertaining to items dimensioned in U.S. customary units) will include metric units of measurement in addition to or in lieu of U.S. customary units. With respect to existing contracts, this requirement applies only if such documentation can be obtained without an increase in contract costs.

(g) Use of the dual dimensions (i.e., both metric and U.S. customary dimensions) on drawings will be avoided unless it is determined in specific instances that such usage will be beneficial. However, the use of tables on the document to translate dimensions from one system of measurement to the other is acceptable.

#### H-10 Proprietary Technical Data and Computer Software

(a) Any deliverable technical data or computer software developed or generated at private expense and considered to be proprietary by the Contractor or subcontractors shall be delivered in accordance with DFARS 252.227-7013 and 252.227-7014. No such data and/or software is incorporated into the Contract at this time.



## Section I - Contract Clauses

## CLAUSES INCORPORATED BY REFERENCE

52.202-1	Definitions	JUL 2004
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	APR 1984
52.203-6	Restrictions On Subcontractor Sales To The Government	SEP 2006
52.203-7	Anti-Kickback Procedures	JUL 1995
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	JAN 1997
52.203-10	Price Or Fee Adjustment For Illegal Or Improper Activity	JAN 1997
52.203-12	Limitation On Payments To Influence Certain Federal Transactions	SEP 2007
52.204-4	Printed or Copied Double-Sided on Recycled Paper	AUG 2000
52.204-10	Reporting Executive Compensation and First-Tier Subcontract Awards	JUL 2010
52.209-6	Protecting the Government's Interest When Subcontracting With Contractors Debarred, Suspended, or Proposed for Debarment	SEP 2006
52.215-8	Order of Precedence--Uniform Contract Format	OCT 1997
52.219-8 (DEV)	Utilization of Small Business Concerns (DEVIATION)	MAY 2004
52.219-28	Post-Award Small Business Program Rerepresentation	APR 2009
52.222-3	Convict Labor	JUN 2003
52.222-21	Prohibition Of Segregated Facilities	FEB 1999
52.222-26	Equal Opportunity	MAR 2007
52.222-35	Equal Opportunity For Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-36	Affirmative Action For Workers With Disabilities	JUN 1998
52.222-37	Employment Reports On Special Disabled Veterans, Veterans Of The Vietnam Era, and Other Eligible Veterans	SEP 2006
52.222-50	Combating Trafficking in Persons	FEB 2009
52.222-54	Employment Eligibility Verification	JAN 2009
52.223-6	Drug-Free Workplace	MAY 2001
52.223-14	Toxic Chemical Release Reporting	AUG 2003
52.225-13	Restrictions on Certain Foreign Purchases	JUN 2008
52.226-1	Utilization Of Indian Organizations And Indian-Owned Economic Enterprises	JUN 2000
52.227-2	Notice And Assistance Regarding Patent And Copyright Infringement	DEC 2007
52.227-11	Patent Rights--Ownership By The Contractor	DEC 2007
52.229-3	Federal, State And Local Taxes	APR 2003
52.232-2	Payments Under Fixed-Price Research And Development Contracts	APR 1984
52.232-8	Discounts For Prompt Payment	FEB 2002
52.232-9	Limitation On Withholding Of Payments	APR 1984
52.232-11	Extras	APR 1984
52.232-17	Interest	OCT 2008
52.232-23 Alt I	Assignment of Claims (Jan 1986) - Alternate I	APR 1984
52.232-25	Prompt Payment	OCT 2008
52.232-33	Payment by Electronic Funds Transfer--Central Contractor Registration	OCT 2003
52.233-1	Disputes	JUL 2002
52.233-3	Protest After Award	AUG 1996

52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.242-13	Bankruptcy	JUL 1995
52.243-1 Alt V	Changes--Fixed-Price (Aug 1987) - Alternate V	APR 1984
52.244-6	Subcontracts for Commercial Items	JUN 2010
52.245-1 (Dev)	Government Property (Deviation)	JUN 2007
52.246-23	Limitation Of Liability	FEB 1997
52.247-63	Preference For U.S. Flag Air Carriers	JUN 2003
52.247-64	Preference for Privately Owned U.S. - Flag Commercial Vessels	FEB 2006
52.249-2	Termination For Convenience Of The Government (Fixed-Price)	MAY 2004
52.249-9	Default (Fixed-Priced Research And Development)	APR 1984
52.253-1	Computer Generated Forms	JAN 1991
252.201-7000	Contracting Officer's Representative	DEC 1991
252.203-7000	Requirements Relating to Compensation of Former DoD Officials	JAN 2009
252.203-7001	Prohibition On Persons Convicted of Fraud or Other Defense-Contract-Related Felonies	DEC 2008
252.203-7002	Requirement to Inform Employees of Whistleblower Rights	JAN 2009
252.204-7000	Disclosure Of Information	DEC 1991
252.204-7003	Control Of Government Personnel Work Product	APR 1992
252.204-7004 Alt A	Central Contractor Registration (52.204-7) Alternate A	SEP 2007
252.204-7008	Export-Controlled Items	APR 2010
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	AUG 2008
252.211-7007	Reporting of Government-Furnished Equipment in the DoD Item Unique Identification (IUID) Registry	NOV 2008
252.215-7004	Excessive Pass-Through Charges	MAY 2008
252.225-7012	Preference For Certain Domestic Commodities	JUN 2010
252.227-7013	Rights in Technical Data--Noncommercial Items	NOV 1995
252.227-7014	Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation	JUN 1995
252.227-7015	Technical Data--Commercial Items	NOV 1995
252.227-7016	Rights in Bid or Proposal Information	JUN 1995
252.227-7019	Validation of Asserted Restrictions--Computer Software	JUN 1995
252.227-7025	Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive Legends	JUN 1995
252.227-7027	Deferred Ordering Of Technical Data Or Computer Software	APR 1988
252.227-7030	Technical Data--Withholding Of Payment	MAR 2000
252.227-7037	Validation of Restrictive Markings on Technical Data	SEP 1999
252.232-7003	Electronic Submission of Payment Requests and Receiving Reports	MAR 2008
252.232-7010	Levies on Contract Payments	DEC 2006
252.235-7011	Final Scientific or Technical Report	NOV 2004
252.243-7001	Pricing Of Contract Modifications	DEC 1991
252.243-7002	Requests for Equitable Adjustment	MAR 1998
252.244-7000	Subcontracts for Commercial Items and Commercial Components (DoD Contracts)	AUG 2009
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

## 52.252-2 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/farsite\\_script.html](http://farsite.hill.af.mil/farsite_script.html)

## 52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Defense Federal Acquisition Regulation (48 CFR Chapter 2) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

## 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.

## 252.235-7010 Acknowledgment of Support and Disclaimer. (MAY 1995)

(a) The Contractor shall include an acknowledgment of the Government's support in the publication of any material based on or developed under this contract, stated in the following terms: This material is based upon work supported by the Defense Advanced Research Projects Agency under Contract No. HR0011-10-C-0180.

(b) All material, except scientific articles or papers published in scientific journals, must, in addition to any notices or disclaimers by the Contractor, also contain the following disclaimer: Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Defense Advanced Research Projects Agency.

REMARKS

FAR 52.219-28	Under paragraph (g), the Contractor represents that it is a small business concern under NAICS Code 541712 assigned to contract number HR0011-10-C-0180.
FAR 52.244-2	insert the word, "N/A," in spaces under paragraphs (d) and (j).
DFARS 252.211-7003	insert the word, "N/A," in spaces under subparagraph (c)(1)(ii).

Section J - List of Documents, Exhibits and Other Attachments

- Attachment No. 1 - Statement of Work for Precision Emplacement of Small Payloads from V-Bat Aircraft Study, dated August 19, 2010 (1 page)
- Attachment No. 2 - Contracting Officer's Representative (COR) Designation Memorandum, dated July 29, 2010 (3 pages)

**STATEMENT OF WORK  
FOR  
PRECISION EMPLACEMENT OF SMALL PAYLOADS  
FROM V-BAT AIRCRAFT STUDY**

The Contractor shall demonstrate a method for precisely emplacing a payload on a pre-defined target location, using an unmanned aircraft such as the V-BAT VTOL UAV. The demonstration shall consist of autonomous maneuvering to the target and autonomous attachment of payload. Key operational functions, which are independent of vehicle and payload scale, include:

- Long range delivery of assets
- Autonomous and precise location of target
- Autonomous, reliable and accurate attachment of payload to target structure
- Removal of delivery system after payload emplacement
- Low cost per mission

The Contractor shall develop an attachment scheme, integrate the attachment scheme with the V-Bat vehicle, develop a vision-based terminal maneuvering algorithm, develop a vision-based system for precise manipulation of the attachment arm, and integrate the maneuvering algorithm into the V-Bat flight control software. Included in the design effort, the Contractor shall complete requirements development, design trades on alternate payload attachment schemes, preliminary design of advanced vision-based control schemes, and sizing studies for scaled V-Bat configuration.

<b>TASK</b>	<b>REPORT/DELIVERABLE</b>
Kickoff Meeting. Formalize demonstration goals and project operations.	Kickoff meeting presentation materials. R&D status and progress report for Month 1.
Product requirements elicitation and capture	Requirements document. R&D status and progress report for Month 2.
Design and prototyping of attachment arm	Prototype hardware and design documentation. R&D status and progress report for Month 3.
Development of vision-based target identification system with limited discrimination capability (i.e. it can identify a wire or cable of a particular color, or it can identify a truss segment in a structure)	Design documentation. R&D status and progress report for Month 4.
Integration of vision control systems with existing V-Bat control system, Alternate attachment study	Report on integration of vision control with V-Bat control system. Report on alternate attachment study. R&D status and progress report for Month 5 and Month 6.
Integration of attachment arm with V-Bat structure, preliminary work on vision system for precision emplacement	Video of test flight of V-Bat with arm extended. Interim report on design of vision system for precision emplacement. R&D status and progress report for Month 7 and Month 8.
Advanced vision system study, Planning for follow-on phase	Report on development options for future vision systems. Plan for future work. R&D status and progress report for Month 9.
Development of vision system for precision manipulation of arm (mostly COTS components)	Design documentation, and video of manipulator arm response to vision control system. R&D status and progress report for Month 10 and Month 11.
Demonstration of vision-controlled precision emplacement of payload (1-5 lb) using V-Bat PE vehicle and mechanical attachment	Video of precision emplacement flight test. Final briefing and report.

~ End ~

August 19, 2010



**DEFENSE ADVANCED RESEARCH PROJECTS AGENCY**  
3701 NORTH FAIRFAX DRIVE  
ARLINGTON, VA 22203-1714

July 23, 2010

**MEMORANDUM FOR CONTRACTING OFFICER'S REPRESENTATIVE**

**FROM:** DARPA, Contracts Management Office

**TO:** Dr. Carl P. Tilmann, Computational Aerophysics Branch, Air Vehicles  
Directorate, Air Force Research Laboratory, AFRL/RBAC, Bldg 146, Room 225,  
2210 8th Street, WPAFB, OH 45433-7542  
(Email: Carl.Tilmann@wpafb.af.mil)

**SUBJECT:** Appointment as Contracting Officer's Representative (COR)

1. You are hereby appointed as the Contracting Officer's Representative for:

Contract Number:	HR0011-10-C-0180
Contractor:	M L B Company
Program Description:	Covert Precision Emplacement of Small Payloads from V-Bat Aircraft

2. This appointment authorizes and designates you to perform the following duties and/or responsibilities as specified herein:
- Furnish plans, schedules, specifications, descriptions, and other documents to the contractor as required by the contract.
  - Assist the contractor in interpreting technical aspects of the contract specifications/statement of work. Differences of opinion and interpretations which could affect the terms and conditions of the contract will be referred to the contracting officer for resolution.
  - Provide Government recommendations/approvals to the contractor promptly in all cases where the contract calls for technical approval.
  - Observe, monitor, and assess the contractor's performance under the terms of the contract. This includes reporting promptly to the contracting officer any failures, delays, or significant deviations of performance, quality, costs, or other actions which might jeopardize contract performance.

3. In the performance of the duties delegated to you in this letter, you are cautioned that you could be held personally liable for actions taken or directions given by you to the contractor that are beyond the authorities given to you in this letter. The duties or authorities in this letter are not delegable; therefore, you must advise the Contracting Officer or the Contract Administrator/Specialist immediately when you are unable to perform these duties.
4. In your dealings with the contractor you must not give technical direction as though the contractor's employees are Government employees. You must maintain a formal, arms-length relationship with the contractor in order to avoid even an appearance that the contract is one for personal services. If the contractor's performance takes place in a Government facility, then to the maximum extent practicable, the contractor's work area should be physically separated from areas in which Government employees work, and communication with the contractor's employees on contractual matters should be only through that contractor employee(s) designated by the contractor to supervise them. You must not give any direction to the contractor that is not authorized by the statement of work because it is not the intent of the Government that a contractor be required to do anything that is not included in the contract.
5. You are responsible for providing prompt notification to the contracting officer any significant deficiencies with respect to contractor performance or other actions which might jeopardize contract performance.
6. You are not authorized by this letter to take any action, either directly or indirectly, that could result in a change in the pricing, quantity, quality, place of performance, delivery schedule or any other terms and conditions of the basic contract, or to direct the accomplishment of effort which would exceed the scope of the basic contract. You must be especially cautious in providing interpretation of the specifications/ statement of work. The agreement reached or technical direction given must be formalized in writing with copies to the contracting officer. You shall also inform the contractor that if he believes that the COR's interpretation is erroneous, the contractor must notify the contracting officer in writing concerning the details of his position.
7. Specific duties in addition to those above are as follows:
  - a. Control all government technical interfaces with the contractor.
  - b. Ensure that copies of government technical correspondence are forwarded to the contracting officer for placement in the contract file.
  - c. Promptly furnish documentation on any requests for change, deviation, or waiver (whether generated by the Government or the contractor) to the contracting officer for appropriate action.
  - d. Review and, if required (i.e., Fixed Price Payments), accept invoices submitted through WAWF as stipulated in Section G of the Contract.

- e. Provide required review of Patent/Invention Disclosures made in I-Edison (<http://www.iedison.gov>).
  - f. The COR must maintain a separate file for each contract for which he/she acts as COR. The file should serve as a repository and record of all documents and communications between the contractor and the COR. At a minimum, the file must include a copy of the contract and all modifications as well as the COR appointment letter. Examples of other file documentation may include:
    - Reports required per the contract, e.g. interim and final technical or patent reports
    - Memoranda for Record documenting important contract discussions
    - Records of formal meetings, e.g. post award conference, program reviews, etc.
  - g. Assist ACO and/or PCO, as requested, with closeout activities at completion of contract period of performance.
8. If this is your first appointment as a COR or if you have not performed COR duties within the last two years, and in order to comply with DFARS 201.6-2, you must complete COR training immediately so that you can properly execute your responsibilities under this contract. A good source of COR training is available via a web-based module, CLC 106, "Contracting Officer Representative with a Mission Focus" at [www.dau.mil](http://www.dau.mil).
9. Your appointment as COR for this effort expires upon final disposition of the contract.
10. Your good judgment in performing your duties under the contract will have an important effect on the value of the performance obtained by the Government.

(b)(6)

Christopher L. Glista  
Contracting Officer

Date

7/23/10



Dr. Carl Tilmann  
Contracting Officer's Representative

Date

29 July 2010