

**AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT**

1. Contract ID Code  
Firm Fixed Price

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2. Amendment/Modification No. P00001	3. Effective Date 2014MAR20	4. Requisition/Purchase Req No. SEE SCHEDULE	5. Project No. (If applicable)
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6. Issued By U.S. ARMY CONTRACTING COMMAND PATRICIA ROUSSIN WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL  EMAIL: PATRICIA.M.ROUSSIN@US.ARMY.MIL	Code W56HZV	7. Administered By (If other than Item 6) DCMA SANTA ANA 34 CIVIC CENTER PLAZA ROOM 5001 SANTA ANA, CA 92701-4056	Code S0513A
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8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code)  PHYSICAL OPTICS CORPORATION 1845 WEST 205TH STREET TORRANCE, CA 90501-1821	<input type="checkbox"/>	9A. Amendment Of Solicitation No.
	<input type="checkbox"/>	9B. Dated (See Item 11)
	<input checked="" type="checkbox"/>	10A. Modification Of Contract/Order No. W56HZV-13-C-0120
	<input type="checkbox"/>	10B. Dated (See Item 13) 2013MAR14
Code 0AZ36	Facility Code	

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers

is extended,  is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing items 8 and 15, and returning \_\_\_\_\_ copies of the amendments; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

**12. Accounting And Appropriation Data (If required)**

ACRN: AB NET INCREASE: \$49,998.20

**13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS  
It Modifies The Contract/Order No. As Described In Item 14.**

<input type="checkbox"/>	A. This Change Order is Issued Pursuant To: The Contract/Order No. In Item 10A.	The Changes Set Forth In Item 14 Are Made In
<input type="checkbox"/>	B. The Above Numbered Contract/Order Is Modified To Reflect The Administrative Changes (such as changes in paying office, appropriation data, etc.) Set Forth In Item 14, Pursuant To The Authority of FAR 43.103(b).	
<input checked="" type="checkbox"/>	C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of:	MUTUAL AGREEMENT OF THE PARTIES
<input type="checkbox"/>	D. Other (Specify type of modification and authority)	

**E. IMPORTANT:** Contractor  is not,  is required to sign this document and return \_\_\_\_\_ copies to the Issuing Office.

**14. Description Of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)**

SEE SECOND PAGE FOR DESCRIPTION

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. Name And Title Of Signer (Type or print)	16A. Name And Title Of Contracting Officer (Type or print) LYNN M. BYRNE LYNN.M.BYRNE@US.ARMY.MIL (586)282-6553		
15B. Contractor/Offeror  (Signature of person authorized to sign)	15C. Date Signed	16B. United States Of America By _____ /SIGNED/ (Signature of Contracting Officer)	16C. Date Signed 2014MAR20

**CONTINUATION SHEET****Reference No. of Document Being Continued**

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PIIN/SIIN W56HZV-13-C-0120

MOD/AMD P00001

**Name of Offeror or Contractor:** PHYSICAL OPTICS CORPORATION

## SECTION A - SUPPLEMENTAL INFORMATION

Buyer Name: PATRICIA ROUSSIN  
Buyer Office Symbol/Telephone Number: CCTA-ASG-C/(586)282-9610  
Type of Contract: Firm Fixed Price  
Kind of Contract: Research and Development Contracts  
Type of Business: Other Small Business Performing in U.S.  
Surveillance Criticality Designator: C  
Weapon System: No Identified Army Weapons Systems  
Contract Expiration Date: 2013SEP14

\*\*\* End of Narrative A0000 \*\*\*

PROGRAM: Phase I SBIR, Topic A12-119, Retro-transmitting Omni-bidirectional On-the-move Laser-illuminated Non-line-of-sight Optical Communication System

PURPOSE OF MODIFICATION: Execute a Change Order to provide additional language to support the funding of the Phase I additional effort

PRIOR CONTRACT AMOUNT: \$100,000.00  
AMOUNT OF THIS ACTION: \$ 49,998.20  
CURRENT CONTRACT AMOUNT: \$149,998.20

1. The purpose of this bilateral Modification P00001 is to execute a Change Order to Contract W56HZV-13-C-0120, under the authority of FAR 52.243-1, Changes - Fixed Price (Alt V, April 1984), to provide additional language in the Statement of Work to support the additional effort for this Phase I SBIR as described in the Contractor's proposal, page 7, Phase I Option for Transition to Phase II.

2. As a result of this Modification P00001, the contract is hereby modified as follows:

## a) SECTION B - SUPPLIES OR SERVICES AND PRICES/COST:

- (i) Delete CLIN 0005 in its entirety
- (ii) Establish CLIN 0006 as a "Phase I Additional Effort"
- (iii) SubCLIN 0006AA is established and funded in the amount of \$24,999.10 to fund a portion of the additional effort.
- (iv) SubCLIN 0006AB is established and funded in the amount of \$24,999.10 to fund the remainder of the additional effort.
- (v) revise Narrative B0002 from "If Option CLIN 0005 is exercised (ref. C.4, C.5 & H.1)..." to "If the Phase I Additional Effort CLIN 0006 is funded (ref. C.4 & C.5)..."
- (vi) further revise Narrative B0002 from "...following commencement of the option performance period." to "...following award of the Phase I additional effort."

## b) SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT:

- (i) revise paragraph C.4 from "Option Effort" to "Phase I Additional Effort".
- (ii) revise paragraph C.4.1 to remove "If the option is exercised by the contracting officer,".
- (iii) revise paragraph C.5 from "Deliverables - Option Effort" to "Deliverables - Phase I Additional Effort".
- (iv) revise paragraph C.5.1 to remove "If the option is exercised".

## c) SECTION F - DELIVERIES OR PERFORMANCE:

- (i) revise paragraph F.3 from "Option Effort" to "Phase I Additional Effort" and eliminate the reference to paragraph H.1.
- (ii) revise paragraph F.3.1 as follows:

## FROM:

"The period of performance shall be a maximum of four months following the end of the basic contract period, unless the option is exercised more than six months after the date of contract award, in which case the period of performance for the option effort will be a maximum of four months following the date of option exercise."

## TO:

"The period of performance shall be a maximum of one year following the end of the basic contract period, unless the Phase I additional effort is funded more than one year after the date of contract award, in which case the period of performance for the Phase I additional effort will be a maximum of four months following the date of funding of the Phase I additional effort."

- (iii) revise paragraph F.3.2 to remove "If the option is exercised by the contracting officer, then unless otherwise instructed in the option modification,..." and insert "If the Phase I additional effort is funded, then unless otherwise instructed in the Phase I additional effort modification,..."
- (iv) further revise paragraph F.3.2 from "...completion of the option period." to "...completion of the Phase I additional effort."

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b> <b>PIIN/SIIN</b> W56HZV-13-C-0120 <b>MOD/AMD</b> P00001	<b>Page</b> 3 <b>of</b> 10
<b>Name of Offeror or Contractor:</b> PHYSICAL OPTICS CORPORATION		

d) SECTION G - CONTRACT ADMINISTRATION DATA:  
(i) add accounting and appropriations data for the funds being added under this Modification P00001 for the SBIR Phase I additional effort in the amount of \$49,998.20.

e) SECTION H - SPECIAL PROVISIONS  
(i) delete H.1 "Option CLIN"  
(ii) delete paragraph H.1.1  
(iii) revise paragraph references H.2, H.2.1, H.2.2, and H.2.3 to paragraph references H.1, H.1.1, H.1.2, and H.1.3.

3. As a result of this Modification P00001, the total contract value is increased by \$49,998.20 from \$100,000.00 to \$149,998.20.

4. Except as specifically provided in this Modification P00001, all other terms and conditions of this contract remain unchanged.

\*\*\* END OF NARRATIVE A0001 \*\*\*

Name of Offeror or Contractor: PHYSICAL OPTICS CORPORATION

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT										
	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS														
0006	SBIR PH I ADDITIONAL EFFORT														
0006AA	<p><u>PHASE I ADDITIONAL EFFORT</u></p> <p>SERVICE REQUESTED: SBIR PH I ADDITIONAL EFFORT                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R33SB061R3 PRON AMD: 01 ACRN: AB</p> <p>Supplies/Services in support of Interim Addendum to the Final Technical Report and the Phase I R&amp;D Project Summary Final Technical Report in accordance with C.5.1 and C.6 (Reference Data Item A001 and A002).</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DLVR SCH</td> <td>PERF COMPL</td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> </tr> <tr> <td>001</td> <td>1</td> </tr> <tr> <td></td> <td><u>DATE</u></td> </tr> <tr> <td></td> <td>21-MAY-2014</td> </tr> </table> <p>\$ 24,999.10</p>	DLVR SCH	PERF COMPL	<u>REL CD</u>	<u>QUANTITY</u>	001	1		<u>DATE</u>		21-MAY-2014	1	LO		\$ 24,999.10
DLVR SCH	PERF COMPL														
<u>REL CD</u>	<u>QUANTITY</u>														
001	1														
	<u>DATE</u>														
	21-MAY-2014														
0006AB	<p><u>SBIR PHASE I ADDITIONAL EFFORT</u></p> <p>SERVICE REQUESTED: SBIR PH I ADDITIONAL EFFORT                      CLIN CONTRACT TYPE:                      Firm Fixed Price                      PRON: R33SB061R3 PRON AMD: 01 ACRN: AB</p> <p>Supplies/Services in support of the Final Addendum to the Final Technical Report and the Final SBIR Phase I R &amp; D Project Summary Report in accordance with C.5.1 and C.6 (Reference Data item A001 and A002).</p> <p>(End of narrative B001)</p> <p><u>Inspection and Acceptance</u>                      INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p>	1	LO		\$ 24,999.10										



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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

STATEMENT OF WORK:

C.1 The Contractor, acting as an independent Contractor and not as an agent of the Government, shall provide the necessary personnel, facilities, materials, and services to complete the effort described on pages 6-13, Phase I Work Plan, of the Contractor's proposal, Small Business Innovation Research (SBIR) Program Topic Number A12-119, Proposal Number A123-119-0060, entitled: Retro-transmitting Omni-Bidirectional On-the-move Laser-Illuminated Non-line-of-sight Optical Communication System(incorporated by reference).

C.2 Deliverables

C.2.1 The Contractor shall submit two (2) Interim Technical Reports and one (1) Final Technical Report in accordance with the requirements of Exhibit A, Contract Data Requirements List (DD Form 1423), Data Item A002.

C.2.1.1 Interim Technical Reports

C.2.1.1.1 Each Interim Technical Report shall be in Contractor format and shall address the technical information and cover all the work performed to date against the Statement of Work.

C.2.1.1.2 Additionally, each Interim Technical Report shall include:

C.2.1.1.2.1 At the beginning of the report shall be: the Contractor's name and address; the contract number; the nomenclature of the program; the date of the report; the period covered by the report; the title of the report; the security classification; and the name of the issuing Government activity;

C.2.1.1.2.2 A description of the progress made against milestones during the reporting period;

C.2.1.1.2.3 Results, positive or negative, obtained relative to previously identified problem areas, with conclusions and recommendations;

C.2.1.1.2.4 Any significant changes to the Contractor's organization or method of operation or to the planned technical milestone schedule;

C.2.1.1.2.5 Problem areas affecting technical or schedule elements, with background and any recommendations for solutions beyond the scope of the contract;

C.2.1.1.2.6 Contract schedule status;

C.2.1.1.2.7 Plans for activities during the following reporting period;

C.2.1.1.2.8 Name and telephone number of the preparer of the report; and

C.2.1.1.2.9 Appendixes for any necessary tables, references, photographs, illustrations, and charts.

C.2.1.1.3 Information contained in the first Technical Interim Report shall not be duplicated in the second Interim Technical Report unless duplication is required to clearly document an effort that overlaps the timeframe of each report.

C.2.1.2 Final Technical Report

C.2.1.2.1 The Contractor shall prepare and submit a Final Technical Report in Contractor format addressing all of the work performed against the Scope of Work (reference C.1) during the contract performance period, in accordance with the requirements of Exhibit A, Contract Data Requirements List (DD Form 1423) Data Item A002.

C.3 Start of Work Meeting

C.3.1 The Contractor shall plan and participate in a Start of Work meeting to take place no later than thirty (30) days after award of the base contract via teleconference. The Government and Contractor shall mutually agree to the date and time of the Start of Work meeting. The Contractor shall at a minimum invite the Contracting Officer's Representative (COR) identified in Section G or in an appointment letter, the Contract Specialist identified on the face page of this document, and the Administrative Contracting Officer (ACO). The COR, Contract Specialist, and ACO shall be given at least 14 days advance notice of the time and date of the Start of Work meeting. The preferred method of notification is by email.

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C.4 Phase I Additional Effort

C.4.1 The Contractor shall complete the effort described on page 7, in the final paragraph of paragraph 3.1 of the Contractor's proposal, Small Business Innovative Research (SBIR) Program Topic Number A12-119, Proposal Number A123-119-0060, entitled, "Retro-transmitting Omni-Bidirectional On-the-move Laser-Illuminated Non-line-of-sight Optical Communication System"(incorporated by reference).

C.5 Deliverables - Phase I Additional Effort

C.5.1 Technical Report Addendum (Interim and Final). The Contractor shall submit an Interim Addendum to the Final Technical Report and a Final Addendum to the Final Technical Report, in accordance with the requirements of Exhibit A, Contract Data Requirements List (DD Form 1423) Data Item A002.

C.6 Project Summary Report. The Contractor shall prepare and submit a Project Summary Report in accordance with the requirements of Exhibit A, Contract Data Requirements List (DD Form 1423) Data Item A001.

\*\*\* END OF NARRATIVE C0002 \*\*\*

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MOD/AMD P00001

**Name of Offeror or Contractor:** PHYSICAL OPTICS CORPORATION

## SECTION F - DELIVERIES OR PERFORMANCE

F.1 Delivery

F.1.1 All items other than data (if any) called for in the contract shall be delivered FOB destination to:

US Army Tank Automotive Research, Development and  
Engineering Center (TARDEC)  
ATTN: Robert Karlsen, RDTA-RS/MS 264  
6501 E. 11 Mile Rd.  
Warren, MI 48397-5000

F.1.2 Delivery of data set forth in the contract shall be in accordance with the Contract Data Requirements List (CDRL), DD Form 1423 (Exhibit A).

F.2 Performance - CLINS 0001AA, 0001AB, 0001AC and 0002

F.2.1 The period of performance shall be six (6) months from the date of award, including submission of the Final Technical Report.

F.2.2 The Contractor shall prepare and submit a Final Technical Report in Contractor format addressing all of the work performed against the Scope of Work during the contract in accordance with the requirements of Exhibit A, Contract Data Requirements List (DD Form 1423) Data Item A002. Acceptance of the Final Technical Report will constitute completion of the basic contract period.

F.3 Performance - Phase I Additional Effort(ref. C.4 and C.5)

F.3.1 The period of performance shall be a maximum of one year following the end of the basic contract period, unless the Phase I additional effort is funded more than one year after the date of contract award, in which case the period of performance for the Phase I Additional Effort will be a maximum of four months following the date of funding of the Phase I Additional Effort.

F.3.2 If the Phase I Additional Effort is funded, then unless otherwise instructed in the Phase I Additional Effort modification, the Contractor shall submit an Interim Addendum and a final Addendum to the Final Technical Report in accordance with the requirements of Exhibit A, Contract Data Requirements List (DD Form 1423) Data Item A002. Acceptance of the Final Addendum will constitute completion of the Phase I Additional Effort.

F.4 Project Summary Report: The Contractor shall prepare and submit a Project Summary Report in accordance with the requirements of Exhibit A, CDRL, Data Item Number A001.

F.5 Contractor Manpower Report - CLIN 0003

F.5.1 The Contractor shall submit Contractor manpower reporting data in accordance with C-2, TACOM clause 52.237-4000. The report shall be entered on the following website by 31 October each year:

<https://cmra.army.mil>

F.6 Final Patent Report - CLIN 0004

F.6.1 The Contractor shall submit a Report of Inventions and Subcontracts, Form DD882, within three (3) months after contract completion to the Contracting Officer's Representative (COR) and the Contract Specialist.

\*\*\* END OF NARRATIVE F0002 \*\*\*

**CONTINUATION SHEET**

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**PIIN/SIIN** W56HZV-13-C-0120

**MOD/AMD** P00001

**Name of Offeror or Contractor:** PHYSICAL OPTICS CORPORATION

SECTION G - CONTRACT ADMINISTRATION DATA

LINE	PRON/ AMS CD/ MIPR/ <u>ITEM</u>	OBLG <u>STAT</u>	JO NO/ <u>ACCT ASSIGN</u>	ACRN	PRIOR AMOUNT	INCREASE/ DECREASE	CUMULATIVE AMOUNT
0006AA	R33SB061R3	1	R.0008576.1.1	AB \$	0.00 \$	24,999.10 \$	24,999.10
0006AB	R33SB061R3	2	R.0008576.1.1	AB \$	0.00 \$	24,999.10 \$	24,999.10
					NET CHANGE	\$ 49,998.20	

ACRN	ACCOUNTING CLASSIFICATION	INCREASE/ DECREASE
AB	021 201320142040 A60FL 665502M40RL03 2550 L035677652 R.0008576.1.1	021001 \$ 49,998.20
		NET CHANGE \$ 49,998.20

NET CHANGE FOR AWARD:	PRIOR AMOUNT OF AWARD	INCREASE/DECREASE AMOUNT	CUMULATIVE OBLIG AMT
\$	100,000.00	\$ 49,998.20	\$ 149,998.20

LINE	ACRN	EDI/SFIS ACCOUNTING CLASSIFICATION	CUMULATIVE OBLIG AMT
0006AA	AB	021 201320142040 A60FL 665502M40RL03 2550 L035677652 R.0008576.1.1	021001
0006AB	AB	021 201320142040 A60FL 665502M40RL03 2550 L035677652 R.0008576.1.1	021001

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**Name of Offeror or Contractor:** PHYSICAL OPTICS CORPORATION

## SECTION H - SPECIAL CONTRACT REQUIREMENTS

## SPECIAL PROVISIONS

H.1 Government-Furnished Property (GFP)

H.1.1 The Government may furnish such items of Government-owned property as deemed necessary to assist the Contractor in the performance of the contract requirements.

H.1.2 Upon completion of the contract or in the event of the termination of the contract, either partial or complete, all Government-owned property, including both property furnished to the Contractor and property acquired by the Contractor on the account of the Government, which will have become surplus or excess to any remaining contract requirements, shall be reported immediately by the Contractor to the Contracting Officer at the US Army Contracting Command, TACOM Contracting Center, ATTN: CCTA-ASG-C, Warren, MI 48397-5000 for redistribution, shipping instructions, release for disposal, or other actions.

H.1.3 Specific Government-Furnished Property to be provided is/are as follows:

<u>Item</u>	<u>Qty</u>	<u>Serial No./NSN (if applicable)</u>	<u>Acquisition Value</u>
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NONE

\*\*\* END OF NARRATIVE H0002 \*\*\*