

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 2013DEC04	4. Requisition/Purchase Req No. SEE SCHEDULE	5. Project No. (If applicable)
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6. Issued By U.S. ARMY CONTRACTING COMMAND JORDAN VANDESTEENE WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL EMAIL: JORDAN.M.VANDESTEENE@US.ARMY.MIL	Code W56HZV	7. Administered By (If other than Item 6) DCMA ATLANTA 2300 LAKE PARK DRIVE, SUITE 300 SMYRNA GA 30080	Code S1103A
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8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code) JCB INC. 2000 BAMFORD BLVD POOLER, GA 31322-9504	<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-0116
	<input type="checkbox"/>	10B. Dated (See Item 13) 2013FEB01
Code OJKF0	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)

NO CHANGE TO OBLIGATION DATA

**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:	FAR 43.103(a)
<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) TRISH PIERCE TRISH.PIERCE@US.ARMY.MIL (586)282-8128		
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 2013DEC04

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Name of Offeror or Contractor: JCB INC.		

SECTION A - SUPPLEMENTAL INFORMATION

Buyer Name: JORDAN VANDESTEEENE
 Buyer Office Symbol/Telephone Number: CCTA-ADEC/(586)282-3530
 Type of Contract: Firm Fixed Price
 Kind of Contract: Research and Development Contracts
 Type of Business: Large Business Performing in U.S.
 Surveillance Criticality Designator: C
 Weapon System: No Identified Army Weapons Systems

*** End of Narrative A0000 ***

1. The purpose of modification P00001 to contract W56HZV-13-C0116 is to make the following changes to the Statement of Work. These changes shall be made at no cost to the Government.

2. In Lieu of a final design for the electrical power increase described in paragraph C.2.3, JCB shall develop a phase 1 type proposal for an air spade "mini" concept that trades performance for lower cost and payload reduction.

3. Paragraph C.2.7 is hereby changed FROM: JCB shall develop final engineering designs (Phase II) for each proposed technology identified in items 2.2, 2.3 and 2.4. The final engineering design shall be sufficient to procure and install prototype hardware. The package shall include FEA analysis, technical data package (level 2) 3D models & 2D models/drawings), bill of materials and installation instructions.

TO: JCB shall develop final engineering designs (Phase II) for each proposed technology identified in items 2.2 (with the exception of C.2.2, 1. (B)) and 2.4. The final engineering design shall be sufficient to procure and install prototype hardware. The package shall include FEA analysis, technical data package (level 2) 3D models & 2D models/drawings), bill of materials and installation instructions.

4. Paragraph C.2.2 is modified to include the following as an addition to the Air Spade:

(B) Air Spade Mini

Description: The proposed design shall look to maximize performance (excavating capability and debris removal) of the air spade "mini" while working within the existing power limitations. The phase 1 air spade "mini" design study shall include:

- Alternative approaches (source of power, size of components, expected pressure, expected flow, packaging of components, impact on system performance)
- Performance (estimated excavation capability and debris removal capability)
- Cost Estimate (rough estimate approximating production cost)
- Cost estimate to finalize design and procure a prototype

5. Paragraph C.2.2 1.(A) is hereby changed FROM: Description: Boom arm attachment capable of excavating small holes and moving light debris through the use of concentrated air. Must be capable of operating with the Rake w/ Spork attached (item #2). If the air spade requires an alternative power supply, it must be capable of operating on JP-8 IAW MIL-DTL-83133 and Diesel IAW ASTM D975.

Performance:

- Minimum excavated depth of 13cm with capability up to 31cm
- Capable of moving debris with a weight up to 10lbs (e.g. paper, boxes, rocks, garbage and cans)
- Capable of excavating crushed gravel IAW ASTM D2488
- Capable of providing continuous high pressure flow for a minimum of 2 minutes

TO: Description: Boom arm attachment capable of excavating small holes and moving light debris through the use of concentrated air. Must be capable of operating with the Rake w/ Spork attached (item #2). If the air spade requires an alternative power supply, it must be capable of operating on JP-8 IAW MIL-DTL-83133 and Diesel IAW ASTM D975.

Performance:

- Option 1 - Air spade shall provide continuous flow of 200 CFM at 175 psi measured at the point of delivery.

or

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-Option 2 - Demonstrate the following:

-Minimum excavated depth of 13cm with capability up to 31cm.

-Capable of moving debris with a weight up to 10lbs (e.g. paper, boxes, rocks, garbage and cans).

-Capable of excavating crushed gravel IAW ASTM D2488.

-Capable of providing continuous high pressure flow for a minimum of 2 minutes.

6. Paragraph C.2.8 is hereby changed FROM: JCB shall submit a final design report for each proposed designed in support of items 2.2, 2.3 and 2.4.

TO: JCB shall submit a final design report for each proposed designed in support of items 2.2 (with the exception of C.2.2, 1. (B)) and 2.4.

7. Paragraph C.2.10 is hereby changed FROM: JCB shall provide a preliminary hardware cost for the air spade, rake w/ spork, clamshell bucket, manhole cutter, upgraded alternator and air filter upgrade.

TO: JCB shall provide a preliminary hardware cost for the air spade, air spade mini, rake w/ spork, clamshell bucket, manhole cutter, and air filter upgrade.

8. Paragraph C.3.3 is hereby changed FROM: JCB shall deliver a Phase I Design Report IAW CDRL A004, 150 days after contract award.

TO: JCB shall deliver a Phase I Design Report IAW CDRL A004, 150 days after contract award and a supplemental Phase I Design Report for the Air Spade Mini (C.2.2, 1. (B)) IAW the format described in CDRL A004, 300 days after contract award.

9. Added clause 52.243-1, Changes -- Fixed Price (AUG1987) -- Alternate V (APR 1984).

10. There are no other changes as a result of this modification; all other terms and conditions remain unchanged.

*** END OF NARRATIVE A0001 ***

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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 SCOPE: Provide engineering support services for the design of new attachments and added machine capability for the HMEE-I in support of the Route Clearance Interrogation System. The Government intends to utilize a two-phase approach. Phase I will include a complete design study of the alternative approaches to the required capability and phase II will include a final engineering design sufficient to procure and install prototype hardware.

C.2 REQUIREMENTS:

C.2.1 - JCB shall conduct a Start of Work meeting approximately 30 days after contract award. The Start of Work meeting will be at TARDEC in Warren, MI. At the Start of Work Meeting, JCB shall present a detailed work schedule (to include deliverables and milestones). JCB will address risks and mitigating actions, and identify principal investigators. JCB shall deliver a read-ahead package (agenda) one week prior to the Start of Work Meeting. JCB shall deliver meeting minutes one week after the Start of Work Meeting, and one week after any subsequent meetings.

C.2.2 - JCB shall perform a design study on the following attachments. JCB shall propose alternative solutions with the phase I proposal.

1. (A) Air Spade:

Description: Boom arm attachment capable of excavating small holes and moving light debris through the use of concentrated air. Must be capable of operating with the Rake w/ Spork attached (item #2). If the air spade requires an alternative power supply, it must be capable of operating on JP-8 IAW MIL-DTL-83133 and Diesel IAW ASTM D975.

Performance:

-Option 1 - Air spade shall provide continuous flow of 200 CFM at 175 psi measured at the point of delivery.

or

-Option 2 - Demonstrate the following:

- Minimum excavated depth of 13cm with capability up to 31cm.
- Capable of moving debris with a weight up to 10lbs (e.g. paper, boxes, rocks, garbage and cans).
- Capable of excavating crushed gravel IAW ASTM D2488.
- Capable of providing continuous high pressure flow for a minimum of 2 minutes.

(B) Air Spade Mini:

Description: The proposed design shall look to maximize performance (excavating capability and debris removal) of the air spade "mini" while working within the existing power limitations. The phase 1 air spade "mini" design study shall include:

- Alternative approaches (source of power, size of components, expected pressure, expected flow, packaging of components, impact on system performance)
- Performance (estimated excavation capability and debris removal capability)
- Cost Estimate (rough estimate approximating production cost)
- Cost estimate to finalize design and procure a prototype

2. Rake w/ Spork:

Description: Boom arm attachment capable of sifting, lifting and dragging material. Must be operational with the air spade (item #1).

Performance:

- Capable of at least 270 degrees (360 degree desired) left to right rotation at the rake w/ spork attachment
- Capable of securely lifting (held firmly without dropping through the full range of motion) with a hydraulic thumb
- Capable of sifting, lifting and dragging at full arm extension through the full radius of the boom arm
- Capable of sifting through crushed rock and gravel - a 1 meter square area at a depth of 12 inches shall be

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sifted in less than 2.5 minutes

- At a minimum, it should be able to pick up items with the following size:
 - A. 1 Disk 5 inch in diameter, 2.25 inch thick and 1 lb.
 - B. 1 Disk 13.25 inch in diameter, 6 inch thick and 35.5 lbs.
 - C. Two Tubes 6.25 inch in diameter, 24 to 34 inches long and each weighing 100 to 120 lbs.
 - D. 700 lb minimum lift capacity

3. Clamshell Bucket:

Description: Boom arm attachment capable of lifting material from holes as small as 3.3 feet square and up to 7 feet deep.

Performance:

- Capable of pick and drop at full arm extension through the full radius of the boom arm
- At a minimum, it should be able to grasp and lift items with the following size from a hole 3.3 ft square and 7 feet deep:
 - E. 1 Disk 5 inch in diameter, 2.25 inch thick and 1 lb.
 - F. 1 Disk 13.25 inch in diameter, 6 inch thick and 35.5 lbs.
 - G. Two Tubes 6.25 inch in diameter, 24 to 34 inches long and each weighing 100 to 120 lbs.

4. Manhole Cutter:

Description: Boom arm attachment capable of cutting a manhole.

Performance:

- Capable of cutting concrete and asphalt (different blade type depending on material is permitted)
- Capable of cutting to a depth of 13 inches and a diameter of 36 inches at a rate no greater than 2 minutes per inch

All attachments (items 1 to 4) shall be designed with quick connects for all electrical, pneumatic and hydraulic fittings. All attachments (items 1 to 4) should be easily installed with hand tools, quick coupler connections are preferred. All components shall be capable of operating in extreme dust conditions (per MIL-STD-810). All components shall be capable of operating in temperature extremes ranging from 120F to -25F. All hydraulics must be capable of electric over hydraulic control.

C.2.3 - JCB shall perform a design study to increase electrical power output of the HMEE to support additional demands from add-on technology. JCB shall propose alternative solutions with the phase I proposal.

Investigate the following three scenarios:

- 150 amps of additional power beyond the current 260 amps
- 200 amps of additional power beyond the current 260 amps
- 250 amps of additional power beyond the current 260 amps

C.2.4 - JCB shall perform a design study to investigate the impact of installing a Sy-Klone Air Pre-Cleaner (or equivalent) on the JCB intake stack. This analysis shall provide an engineering analysis that quantifies the impact of added weight on existing hood hardware and brackets. Any areas that require modification to maintain system durability shall be identified and a change package shall be developed.

C.2.5 - JCB shall provide engineering alternatives for each proposed design identified in items 2.2, 2.3 and 2.4. Findings shall be documented in a technical report. At a minimum, the report shall contain assumptions for analysis, trade studies, expected performance, summary of analysis performed, rough/relative cost estimate, and the contractors recommended solution.

C.2.6 - JCB shall participate in a Phase I Design Review at TARDEC in Warren, MI. Design review shall occur 165 days after contract award. JCB shall be prepared to review the pros/cons of each proposed design approach and their recommended design. As an outcome of this review, Government will provide a Phase II path for each required technology. Government recommendation will be provided within 15 days of the phase I design review and closure of any open actions that result from the review.

C.2.7 - JCB shall develop final engineering designs (Phase II) for each proposed technology identified in items 2.2 (with the exception of C.2.2, 1. (B)) and 2.4. The final engineering design shall be sufficient to procure and install prototype hardware. The package shall include FEA analysis, technical data package (level 2) 3D models & 2D models/drawings), bill of materials and installation instructions.

C.2.8 - JCB shall submit a final design report for each proposed designed in support of items 2.2 (with the exception of C.2.2, 1. (B)) and 2.4.

C.2.9 - JCB shall participate in a Phase 2 Design Review at TARDEC in Warren, MI. Design review shall occur 300 days after contract award.

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C.2.10 - JCB shall provide a preliminary hardware cost for the air spade, air spade mini, rake w/ spork, clamshell bucket, manhole cutter, and air filter upgrade.

C.3 DELIVERABLES:

C.3.1 - JCB shall deliver meeting minutes one week after the Start of Work Meeting IAW CDRL A001, and one week after any subsequent meetings.

C.3.2 - JCB shall deliver monthly reports IAW CDRL A003, starting 30 days after the Start of Work meeting. The monthly reports shall address work progress, work issues and work schedule.

C.3.3 - JCB shall deliver a Phase I Design Report IAW CDRL A004, 150 days after contract award and a supplemental Phase I Design Report for the Air Spade Mini (C.2.2, 1. (B)) IAW the format described in CDRL A004, 300 days after contract award.

C.3.4 - JCB shall deliver a Phase II Design Report IAW CDRL A004, 300 days after contract award. With all detail needed to procure and install the technologies under investigation.

C.3.5 - JCB shall deliver computer models and a level 2 drawing package 300 days after contract award. Package shall be provided IAW CDRL A002.

C.4 PERIOD OF PERFORMANCE: The period of performance shall be twelve (12) months from date of contract award.

C.5 TRAVEL: All Travel associated with this effort shall be proposed and conducted in accordance with government Joint Travel Regulations (JTR).

C.6 SECURITY: The security requirements for this task are: Not Classified

*** END OF NARRATIVE C0002 ***

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Name of Offeror or Contractor: JCB INC.

SECTION I - CONTRACT CLAUSES

<u>Status</u>	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-1 ADDED	52.243-1	CHANGES--FIXED PRICE (AUG 1987) -- ALTERNATE V (APR 1984)	APR/1984