

**Revised 02/27/2018**

<b>CURRENT THROUGH:</b>
FAC 2005-95
DPN 20161222
Deviation 2018-O0007
NMCARS 13-14

**Combined synopsis/solicitation**

This is a combined synopsis/solicitation for commercial items prepared in accordance with the format in Federal Acquisition Regulations (FAR) Subpart 13.5, as supplemented with additional information included in this notice. This announcement constitutes the only solicitation; proposals are being requested but a written solicitation will not be issued.

The Naval Research Laboratory (NRL) in Washington, D.C. intends to award a Firm-Fixed-Price (FFP) type contract for an Autonomous Coastal Environmental Survey System as described in Attachment 1 of this announcement. Solicitation documents and incorporated provisions are those in effect through Federal Acquisition Circular 2005-95, DPN 20161222, and NMCARS 13-14.

This combined synopsis/solicitation, N00173-19-Q-AL04, is issued as a Request for Quote (RFQ). The NAICS Code is 334511 (Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing) and the associated small business size standard is 1,250. The associated Federal Supply Code (FSC) is 5840 - Radar Equipment, Except Airborne.

This award will be made to the offeror who represents the best overall value (Lowest Price Technically Acceptable (LPTA) approach) to the government. See Attachment 2 on page 27 for technical evaluation criteria.

SUPPLIES: See Attachment 1 on page 20 for performance specifications.

<b>ITEM</b>	<b>QUANTITY</b>
Turn-key autonomous coastal environmental survey system that contains the following elements in a complete and operational system:	
Attachable Outrigger (OA + OP) System	1
Kayak Hull	1
Transport Cart	1
Communications Hardware and Software	1
Remote Control Handset with Display	1
Navigation and Propulsion Hardware and Software	1
Obstacle Avoidance Sensors and Hardware	1
Environmental Sensors & Software	1
Sensor Control Computers and Software	1
Data Storage Hardware and Software	1
Shipping and Storage Containers	1

**FOB Destination - Delivery and acceptance is at Naval Research Laboratory, ATTN Steven Ackleson, 4555 Overlook Ave SW, Code 2321, Washington, D.C. 20375.**

## **AUTHORIZED GOVERNMENT REPRESENTATIVE**

Authorized Government Representative (AGR) for Inspection and Acceptance- Steven Ackleson, Code 7232, Telephone number 202-767-3398, email: [steven.ackleson@nrl.navy.mil](mailto:steven.ackleson@nrl.navy.mil).

Security Matters - Contracting Officer Representative for Security, Code 1226, (202) 767-2240, DSN 297-2240, email: [security-group@nrl.navy.mil](mailto:security-group@nrl.navy.mil).

Safety Matters - Head Safety Branch, Code 3540, (202) 767-2232, DSN 297-2232, email [safety@nrl.navy.mil](mailto:safety@nrl.navy.mil).

## **ELECTRONIC AND INFORMATION TECHNOLOGY (EIT)**

In accordance with Section 508 of the Rehabilitation Act of 1973 (29 USC 794d), all EIT supplies and services provided under this contract must comply with the applicable accessibility standards issued by the Architectural and Transportation Barriers Compliance Board at 36 CFR part 1194 (see FAR Subpart 39.2). Electronic and information technology (EIT) is defined at FAR 2.101.

## **PAYMENT AND INVOICE INSTRUCTIONS**

### **DFARS 252.232-7006 – WIDE AREA WORKFLOW PAYMENT INSTRUCTIONS (MAY 2013)**

(a) *Definitions.* As used in this clause—

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

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

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

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

(c) *WAWF access.* To access WAWF, the Contractor shall—

(1) Have a designated electronic business point of contact in the System for Award Management at <https://www.acquisition.gov>; and

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

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

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

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

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

Invoice and Receiving Report (COMBO)

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

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

Routing Data Table\*

<i>Field Name in WAWF</i>	<i>Data to be entered in WAWF</i>
Pay Official DoDAAC	To Be Completed at Award
Issue By DoDAAC	N00173
Admin DoDAAC	To Be Completed at Award
Inspect By DoDAAC	N00173
Ship To Code	N00173
Ship From Code	N/A
Mark For Code	N/A
Service Approver (DoDAAC)	N00173 Extension
Service Acceptor (DoDAAC)	N00173 Extension
Accept at Other DoDAAC	N/A
Other DoDAAC(s)	N/A

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

(5) *WAWF email notifications.* The Contractor shall enter the e-mail address identified below in the “Send Additional Email Notifications” field of WAWF once a document is submitted in the system.

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COR: [Steven.Ackleson@nrl.navy.mil](mailto:Steven.Ackleson@nrl.navy.mil)  
AO: [Mike.Deniston@nrl.navy.mil](mailto:Mike.Deniston@nrl.navy.mil)

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(g) *WAWF point of contact.*

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

Donna Dargan: [donna.dargan@nrl.navy.mil](mailto:donna.dargan@nrl.navy.mil) or 202-767-0547

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

(End of clause)

The following provisions and clauses are hereby incorporated by reference. Any provisions and clauses not applicable by their terms shall be self-deleting. The full text of FAR provisions or clauses may be accessed electronically at <https://www.acquisition.gov>. The full text of DFARS provisions and clauses may be accessed electronically at <http://farsite.hill.af.mil/vdfara.htm>.

The following provisions and clauses apply to this acquisition:

**FAR 52.204-16 – COMMERCIAL AND GOVERNMENT ENTITY CODE REPORTING (JUL 2016)**

**FAR 52.204-18 – COMMERCIAL AND GOVERNMENT ENTITY CODE MAINTENANCE (JUL 2016)**

**FAR 52.212-1 - INSTRUCTIONS TO OFFERORS-COMMERCIAL ITEMS (OCT 2018)**

The Government intends to award a contract resulting from this solicitation to that responsible offeror proposing the lowest price for the Supplies or Services that has been determined to comply with the requirements of the solicitation.

**FAR 52.212-2 – EVALUATION – COMMERCIAL ITEMS (OCT 2014)**

(a) The Government will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the Government, price and other factors considered. The following factors shall be used to evaluate offers:

- (i) technical capability of the item offered to meet the government requirement;
- (ii) price

**FAR 52.212-3 - OFFEROR REPRESENTATIONS AND CERTIFICATIONS – COMMERCIAL ITEMS (OCT 2018) ALTERNATE I (OCT 2014)**

The offeror shall complete only paragraphs (b) of this provision if the Offeror has completed the annual representations and certification electronically via the System for Award Management (SAM) Web site located at <http://www.sam.gov/portal>. If the Offeror has not completed the annual representations and certifications electronically, the Offeror shall complete only paragraphs (c) through (u) of this provision.

**FAR 52.212-4 - CONTRACT TERMS AND CONDITIONS-COMMERCIAL ITEMS (OCT 2018)**

**FAR 52.212-5, CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS-COMMERCIAL ITEMS (JAN 2019).**

(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) 52.203-19, Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements (Jan 2017) (section 743 of Division E, Title VII, of the Consolidated and Further Continuing Appropriations Act 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions)).

(2) 52.204-23, Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab and Other Covered Entities (Jul 2018) (Section 1634 of Pub. L. 115-91).

(3) 52.209-10, Prohibition on Contracting with Inverted Domestic Corporations (Nov 2015)

(4) 52.233-3, Protest After Award (AUG 1996) (31 U.S.C. 3553).

(5) 52.233-4, Applicable Law for Breach of Contract Claim (OCT 2004) (Public Laws 108-77, 108-78 (19 U.S.C. 3805 note)).

(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 (Sept 2006), with Alternate I (Oct 1995) (41 U.S.C. 4704 and 10 U.S.C. 2402).

(2) 52.203-13, Contractor Code of Business Ethics and Conduct (Oct 2015) (41 U.S.C. 3509).

(3) 52.203-15, Whistleblower Protections under the American Recovery and Reinvestment Act of 2009 (Jun 2010) (Section 1553 of Pub L. 111-5) (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009).

(4) 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards (Oct 2018) (Pub. L. 109-282) (31 U.S.C. 6101 note).

(5) [Reserved]

(6) 52.204-14, Service Contract Reporting Requirements (Oct 2016) (Pub. L. 111-117, section 743 of Div. C).

(7) 52.204-15, Service Contract Reporting Requirements for Indefinite-Delivery Contracts (Oct 2016) (Pub. L. 111-117, section 743 of Div. C).

(8) 52.209-6, Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment (Oct 2015) (31 U.S.C. 6101 note).

(9) 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matters (Oct 2018) (41 U.S.C. 2313).

(10) [Reserved]

- \_\_\_ (11) (i) 52.219-3, Notice of HUBZone Set-Aside or Sole-Source Award (Nov 2011) (15 U.S.C. 657a).
- \_\_\_ (ii) Alternate I (Nov 2011) of 52.219-3.
- \_\_\_ (12) (i) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Oct 2014) (if the offeror elects to waive the preference, it shall so indicate in its offer)(15 U.S.C. 657a).
- \_\_\_ (ii) Alternate I (Jan 2011) of 52.219-4.
- \_\_\_ (13) [Reserved]
- \_\_\_ (14) (i) 52.219-6, Notice of Total Small Business Aside (Nov 2011) (15 U.S.C. 644).
- \_\_\_ (ii) Alternate I (Nov 2011).
- \_\_\_ (iii) Alternate II (Nov 2011).
- \_\_\_ (15) (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.
- \_\_\_ (16) 52.219-8, Utilization of Small Business Concerns (Oct 2018) (15 U.S.C. 637(d)(2) and (3)).
- \_\_\_ (17) (i) 52.219-9, Small Business Subcontracting Plan (Aug 2018) (15 U.S.C. 637 (d)(4)).
- \_\_\_ (ii) Alternate I (Nov 2016) of 52.219-9.
- \_\_\_ (iii) Alternate II (Nov 2016) of 52.219-9.
- \_\_\_ (iv) Alternate III (Nov 2016) of 52.219-9.
- \_\_\_ (v) Alternate IV (Aug 2018) of 52.219-9.
- \_\_\_ (18) 52.219-13, Notice of Set-Aside of Orders (Nov 2011) (15 U.S.C. 644(r)).
- \_\_\_ (19) 52.219-14, Limitations on Subcontracting (Jan 2017) (15 U.S.C. 637(a)(14)).
- \_\_\_ (20) 52.219-16, Liquidated Damages—Subcontracting Plan (Jan 1999) (15 U.S.C. 637(d)(4)(F)(i)).
- \_\_\_ (21) 52.219-27, Notice of Service-Disabled Veteran-Owned Small Business Set-Aside (Nov 2011) (15 U.S.C. 657f).
- \_\_\_ (22) 52.219-28, Post Award Small Business Program Rerepresentation (Jul 2013) (15 U.S.C. 632(a)(2)).

\_\_\_ (23) 52.219-29, Notice of Set-Aside for, or Sole Source Award to, Economically Disadvantaged Women-Owned Small Business Concerns (Dec 2015) (15 U.S.C. 637(m)).

\_\_\_ (24) 52.219-30, Notice of Set-Aside for, or Sole Source Award to, Women-Owned Small Business Concerns Eligible Under the Women-Owned Small Business Program (Dec 2015) (15 U.S.C. 637(m)).

\_X\_ (25) 52.222-3, Convict Labor (June 2003) (E.O. 11755).

\_X\_ (26) 52.222-19, Child Labor—Cooperation with Authorities and Remedies (Jan 2018) (E.O. 13126).

\_X\_ (27) 52.222-21, Prohibition of Segregated Facilities (Apr 2015).

\_X\_ (28) (i) 52.222-26, Equal Opportunity (Sep 2016) (E.O. 11246).

\_\_\_ (ii) Alternate I (Feb 1999) of 52.222-26.

\_X\_ (29) (i) 52.222-35, Equal Opportunity for Veterans (Oct 2015) (38 U.S.C. 4212).

\_\_\_ (ii) Alternate I (July 2014) of 52.222-35.

\_X\_ (30) (i) 52.222-36, Equal Opportunity for Workers with Disabilities (Jul 2014) (29 U.S.C. 793).

\_\_\_ (ii) Alternate I (July 2014) of 52.222-36.

\_X\_ (31) 52.222-37, Employment Reports on Veterans (Feb 2016) (38 U.S.C. 4212).

\_X\_ (32) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496).

\_X\_ (33) (i) 52.222-50, Combating Trafficking in Persons (JAN 2019)

(22 U.S.C. chapter 78 and E.O. 13627).

\_\_\_ (ii) Alternate I (Mar 2015) of 52.222-50, (22 U.S.C. chapter 78 and E.O. 13627).

\_\_\_ (34) 52.222-54, Employment Eligibility Verification (Oct 2015). (E. O. 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)

\_\_\_ (35) (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)). (Not applicable to the acquisition of commercially available off-the-shelf items.)

\_\_\_ (ii) Alternate I (May 2008) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)). (Not applicable to the acquisition of commercially available off-the-shelf items.)

\_\_\_ (36) 52.223-11, Ozone-Depleting Substances and High Global Warming Potential Hydrofluorocarbons (Jun 2016) (E.O.13693).

\_\_\_ (37) 52.223-12, Maintenance, Service, Repair, or Disposal of Refrigeration Equipment and Air Conditioners (Jun 2016) (E.O. 13693).

\_\_\_ (38) (i) 52.223-13, Acquisition of EPEAT® -Registered Imaging Equipment (Jun 2014) (E.O.s 13423 and 13514

\_\_\_ (ii) Alternate I (Oct 2015) of 52.223-13.

\_\_\_ (39) (i) 52.223-14, Acquisition of EPEAT® -Registered Television (Jun 2014) (E.O.s 13423 and 13514).

\_\_\_ (ii) Alternate I (Jun 2014) of 52.223-14.

\_\_\_ (40) 52.223-15, Energy Efficiency in Energy-Consuming Products (Dec 2007) (42 U.S.C. 8259b).

\_\_\_ (41) (i) 52.223-16, Acquisition of EPEAT® -Registered Personal Computer Products (Oct 2015) (E.O.s 13423 and 13514).

\_\_\_ (ii) Alternate I (Jun 2014) of 52.223-16.

\_X\_ (42) 52.223-18, Encouraging Contractor Policies to Ban Text Messaging while Driving (Aug 2011) (E.O. 13513).

\_\_\_ (43) 52.223-20, Aerosols (Jun 2016) (E.O. 13693).

\_\_\_ (44) 52.223-21, Foams (Jun 2016) (E.O. 13696).

\_\_\_ (45) (i) 52.224-3, Privacy Training (Jan 2017) (5 U.S.C. 552a).

\_\_\_ (ii) Alternate I (Jan 2017) of 52.224-3.

\_\_\_ (46) 52.225-1, Buy American--Supplies (May 2014) (41 U.S.C. chapter 83).

\_\_\_ (47) (i) 52.225-3, Buy American--Free Trade Agreements--Israeli Trade Act (May 2014) (41 U.S.C. chapter 83, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, 19 U.S.C. 3805 note, 19 U.S.C. 4001 note, Pub. L. 103-182, 108-77, 108-78, 108-286, 108-302, 109-53, 109-169, 109-283, 110-138, 112-41, 112-42, and 112-43).

\_\_\_ (ii) Alternate I (May 2014) of 52.225-3.

\_\_\_ (iii) Alternate II (May 2014) of 52.225-3.

\_\_\_ (iv) Alternate III (May 2014) of 52.225-3.

\_\_\_ (48) 52.225-5, Trade Agreements (Aug 2018) (19 U.S.C. 2501, *et seq.*, 19 U.S.C. 3301 note).

\_X\_ (49) 52.225-13, Restrictions on Certain Foreign Purchases (June 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).



\_\_\_ (50) 52.225-26, Contractors Performing Private Security Functions Outside the United States (Oct 2016) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302 Note).

\_\_\_ (51) 52.226-4, Notice of Disaster or Emergency Area Set-Aside (Nov 2007) (42 U.S.C. 5150).

\_\_\_ (52) 52.226-5, Restrictions on Subcontracting Outside Disaster or Emergency Area (Nov 2007) (42 U.S.C. 5150).

\_\_\_ (53) 52.232-29, Terms for Financing of Purchases of Commercial Items (Feb 2002) (41 U.S.C. 4505), 10 U.S.C. 2307(f)).

\_\_\_ (54) 52.232-30, Installment Payments for Commercial Items (Jan 2017) (41 U.S.C. 4505, 10 U.S.C. 2307(f)).

X (55) 52.232-33, Payment by Electronic Funds Transfer--System for Award Management (Oct 2018) (31 U.S.C. 3332).

\_\_\_ (56) 52.232-34, Payment by Electronic Funds Transfer—Other Than System for Award Management (Jul 2013) (31 U.S.C. 3332).

\_\_\_ (57) 52.232-36, Payment by Third Party (May 2014) (31 U.S.C. 3332).

\_\_\_ (58) 52.239-1, Privacy or Security Safeguards (Aug 1996) (5 U.S.C. 552a).

\_\_\_ (59) 52.242-5, Payments to Small Business Subcontractors (Jan 2017) (15 U.S.C. 637(d)(12)).

\_\_\_ (60) (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.

\_\_\_ (iii) Alternate II (Feb 2006) 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) 52.222-17, Nondisplacement of Qualified Workers (May 2014) (E.O. 13495)

\_\_\_ (2) 52.222-41, Service Contract Labor Standards (Aug 2018) (41 U.S.C. chapter 67.).

\_\_\_ (3) 52.222-42, Statement of Equivalent Rates for Federal Hires (May 2014) (29 U.S.C. 206 and 41 U.S.C. chapter 67).

\_\_\_ (4) 52.222-43, Fair Labor Standards Act and Service Contract Labor Standards -- Price Adjustment (Multiple Year and Option Contracts) (Aug 2018) (29 U.S.C.206 and 41 U.S.C. chapter 67).

\_\_\_ (5) 52.222-44, Fair Labor Standards Act and Service Contract Labor Standards -- Price Adjustment (May 2014) (29 U.S.C. 206 and 41 U.S.C. chapter 67).

\_\_\_ (6) 52.222-51, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements (May 2014) (41 U.S.C. chapter 67).

\_\_\_ (7) 52.222-53, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services--Requirements (May 2014) (41 U.S.C. chapter 67).

\_\_\_ (8) 52.222-55, Minimum Wages Under Executive Order 13658 (Dec 2015) (E.O. 13658).

\_\_\_ (9) 52.222-62, Paid Sick Leave Under Executive Order 13706 (JAN 2017) (E.O. 13706).

\_\_\_ (10) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations. (May 2014) (42 U.S.C. 1792).

(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 this paragraph (e)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause—

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (Jan 2019) (41 U.S.C. 3509).

(ii) 52.203-19, Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements (Jan 2017) (section 743 of Division E, Title VII, of the Consolidated and Further

Continuing Appropriations Act, 2015 (Pub. L. 113-235) and its successor provisions in subsequent appropriations acts (and as extended in continuing resolutions)).

(iii) 52.204-23, Prohibition on Contracting for Hardware,

Software, and Services Developed or Provided by Kaspersky Lab and

Other Covered Entities (Jul 2018) (Section 1634 of Pub. L. 115-91).

(iv) 52.219-8, Utilization of Small Business Concerns (Oct 2018) (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 \$700,000 (\$1.5 million for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(v) 52.222-17, Nondisplacement of Qualified Workers (May 2014) (E.O. 13495). Flow down required in accordance with paragraph (1) of FAR clause 52.222-17.

(vi) 52.222-21, Prohibition of Segregated Facilities (Apr 2015).

(vii) 52.222-26, Equal Opportunity (Sep 2016) (E.O. 11246).

(viii) 52.222-35, Equal Opportunity for Veterans (Oct 2019) (38 U.S.C. 4212).

(ix) 52.222-36, Equal Opportunity for Workers with Disabilities (Jul 2014) (29 U.S.C. 793).

(x) 52.222-37, Employment Reports on Veterans (Feb 2016) (38 U.S.C. 4212).

(xi) 52.222-40, Notification of Employee Rights Under the National Labor Relations Act (Dec 2010) (E.O. 13496). Flow down required in accordance with paragraph (f) of FAR clause 52.222-40.

(xii) 52.222-41, Service Contract Labor Standards (Aug 2018), (41 U.S.C. chapter 67).

(xiii) (A) 52.222-50, Combating Trafficking in Persons (Jan 2019) (22 U.S.C. chapter 78 and E.O. 13627).

(B) Alternate I (Mar 2015) of 52.222-50 (22 U.S.C. chapter 78 E.O. 13627).

(xiv) 52.222-51, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements (May 2014) (41 U.S.C. chapter 67.)

(xv) 52.222-53, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services--Requirements (May 2014) (41 U.S.C. chapter 67)

(xvi) 52.222-54, Employment Eligibility Verification (Oct 2015) (E. O. 12989).

(xvii) 52.222-55, Minimum Wages Under Executive Order 13658 (Dec 2015).

(xviii) 52.222-62, Paid sick Leave Under Executive Order 13706 (JAN 2017) (E.O. 13706).

(xix) (A) 52.224-3, Privacy Training (Jan 2017) (5 U.S.C. 552a).

(B) Alternate I (Jan 2017) of 52.224-3.

(xx) 52.225-26, Contractors Performing Private Security Functions Outside the United States (Oct 2016) (Section 862, as amended, of the National Defense Authorization Act for Fiscal Year 2008; 10 U.S.C. 2302 Note).

(xxi) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations. (May 2014) (42 U.S.C. 1792). Flow down required in accordance with paragraph (e) of FAR clause 52.226-6.

(xxii) 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)

## **SUBMITTAL INFORMATION**

The closing date for this solicitation is 3:00 PM Eastern Daylight Time, April 19, 2019, and shall be submitted electronically to Anastasia.Lenfest@nrl.navy.mil, Code 3230 in either Microsoft Word or pdf format. Facsimile proposals are NOT authorized.

Any resultant contract will be DO Rated under the Defense Priorities and Allocations System (DPAS). The Contract Specialist must receive any questions concerning the RFP no later than 7 business days before the response date of this solicitation. The offeror's proposal shall be received on or before the response date noted. The submittal email subject line **shall** contain the solicitation number.

The point of contact for this solicitation is Annie Lenfest, Anastasia.lenfest@nrl.navy.mil or Phone: 202-404-3557.

This solicitation shall not be construed as a commitment of any kind.

## **CONTRACT DOCUMENTS, EXHIBITS OR ATTACHMENTS:**

1. Statement of Work/Specifications- Page 20
2. Technical Evaluation Criteria – Page 27
3. Accounting and Appropriation Data – 1 Page\*  
(\* To be included at time of award)

**ATTACHMENT TO SYNOPSIS**

**DFARS 252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)**

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term “supplies” is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) *Representation.* The Offeror represents that it—

\_\_\_\_\_ Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

\_\_\_\_\_ Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at [252.247-7024](#), Notification of Transportation of Supplies by Sea.

(End of provision)

**ADDENDA TO FAR 52.212-4 CONTRACT TERMS AND CONDITIONS--COMMERCIAL ITEMS**

a. The following additional FAR and DFAR clauses and provisions are included as addenda to FAR 52.212-4:

- FAR 52.202-1, Definitions (NOV 2013)
- FAR 52.203-3, Gratuities (APR 1984)
- FAR 52.203-6, - Restrictions on Subcontractor Sales to the Government (SEP 2006)
  - *Alt I (OCT 1995)*
- FAR 52.203-12, Limitation of Payments to Influence Certain Federal Transactions (OCT 2010)
- FAR 52.203-17, Contractor Employee Whistleblower Rights and Requirement To Inform Employees of Whistleblower Rights (APR 2014)
- FAR 52.204-4, Printed or Copied Double-Sided on Recycled Paper (MAY 2011)
- FAR 52.204-10, Reporting Executive Compensation and First-Tier Subcontract Awards Exceeding \$30,000 (OCT 2016)
- FAR 52.204-18, Commercial and Government Entity Code Maintenance (JUL 2016)
- FAR 52.204-19, Incorporation by Reference of Representations and Certifications (DEC 2014)
- FAR 52.204-21; Basic Safeguarding of Covered Contractor Information Systems (JUN 2016)
- FAR 52.223-18, Encouraging Contractor Policies to Ban Text Messaging While Driving (AUG 2011)
- FAR 52.232-39, Unenforceability of Unauthorized Obligations (JUN 2013)
- FAR 52.232-18, Availability of Funds (APR 1984)
- FAR 52.232-40, Providing Accelerated Payments to Small Business Subcontractors (DEC 2013)
- FAR 52.242-13, Bankruptcy (JUL 1995)
- FAR 52.243-1, Changes – Fixed Price (AUG 1987)
- FAR 52.245-9, Use and Charges (APR 2012)
- FAR 52.247-34, F.O.B Destination (NOV 1991)
- FAR 52.252-2, Clauses Incorporated By Reference (FEB 1998)

- FAR 52.253.1, Computer Generated Forms (JAN 1991) )
- DFARS 252.203-7000, Requirements Relating to Compensation of Former DoD Officials (SEP 2011)
- DFARS 252.203-7002, Requirement to Inform Employees of Whistleblower Rights (SEP 2013)
- DFARS 252.203-7003, Agency Office of the Inspector General (DEC 2012)
- DFARS 252.203-7005, Representation Relating to Compensation of Former DoD Officials (NOV 2011)
- DFARS 252.203-7999, Prohibition on Contracting with Entities that Require Certain Internal Confidentiality Agreements (DEVIATION 2015-O0010)(FEB 2015)
- DFARS 252.204-7008, Compliance with Safeguarding Covered Defense Information Controls (DEC 2015)
- DFARS 252.204-7011, Alternative Line Item Structure (SEP 2011)
- DFARS 252.204-7012, Safeguarding Covered Defense Information and Cyber Incident Reporting (DEC 2015)
- DFARS 252.204-7013, Limitations on the Use or Disclosure of Information by Litigation Support Offeror (MAY 2016)
- DFARS 252.204-7014, Limitations on the Use or Disclosure of Information by Litigation Support Contractors (MAY 2016)
- DFARS 252.204-7015, Notice of Authorized Disclosure of Information for Litigation Support (MAY 2016)
- DFARS 252.209-7004, Subcontracting with Firms that are Owned or Controlled by the Government of a Terrorist Country (DEC 2014).
- DFARS 252.213-7000, Notice to Prospective Suppliers on Use of Past Performance Information Retrieval System-Statistical Reporting in Past Performance (JUN 2015)  
Evaluations Less Than or Equal to \$1 Million
- DFARS 252.215-7007, Notice of Intent to Resolicit (JUN 2012)
- DFARS 252.215-7008, Only One Offer (OCT 2013)
- DFARS 252.219-7003, Small Business Subcontracting Plan (DoD Contracts) (DEVIATION 2018-O0007)  
- Basic (DEC 2017)  
Alternate I (MAR 2016)
- DFARS 252.219-7004, Small Business Subcontracting Plan (Test Program) (OCT 2014)
- DFARS 252.225-7000, Buy American Act - Balance of Payments Program Certificate - Basic (NOV 2014)  
Alternate I (NOV 2014)
- DFARS 252.225-7001, Buy American Act and Balance of Payments Program - Basic (NOV 2014)
- DFARS 252.225-7006, Acquisition of the American Flag (AUG 2015)
- DFARS 252.225-7012, Preference for Certain Domestic Commodities (FEB 2013) Exceeding \$150,000
- DFARS 252.225-7013, Duty-Free Entry (MAY 2016)
- DFARS 252.225-7035, Buy American-Free Trade Agreements-Balance of Payments Program Certificate - Basic (NOV 2014)
- DFARS 252.225-7036, Buy American Act-Free Trade Agreements-Balance of Payments Program - Basic (NOV 2014) Exceeding \$25,000, but is Less Than \$191,000
- DFARS 252.226-7001, Utilization of Indian Organizations, Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns (SEP 2004)  
Exceeding \$500,000
- DFARS 252.232-7003, Electronic Submission of Payment Requests and Receiving Reports (JUN 2012)
- DFARS 252.232-7010, Levies on Contract Payments(DEC 2006)
- DFARS 252.232-7011, Payments in Support of Emergencies and Contingency Operations (MAY 2013)
- DFARS 252.243-7002, Requests For Equitable Adjustment (DEC 2012)
- DFARS 252.244-7000, Subcontracts for Commercial Items (JUN 2013)

b. ADDITIONAL FAR AND DFARS CLAUSES IN FULL TEXT:

**FAR 52.233-2 - SERVICE OF PROTEST (SEP 2006)**

Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from the Control Desk, Code 3200, Bldg. 222, Rm. 115, Naval Research Laboratory, 4555 Overlook Ave., S.W., Washington DC 20375-5326.

The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

**DFARS 252.211-7003 - ITEM IDENTIFICATION AND VALUATION (MAR 2016)**

(a) *Definitions.* As used in this clause—

“Automatic identification device” means a device, such as a reader or interrogator, used to retrieve data encoded on machine-readable media.

“Concatenated unique item identifier” means—

(1) For items that are serialized within the enterprise identifier, the linking together of the unique identifier data elements in order of the issuing agency code, enterprise identifier, and unique serial number within the enterprise identifier; or

(2) For items that are serialized within the original part, lot, or batch number, the linking together of the unique identifier data elements in order of the issuing agency code; enterprise identifier; original part, lot, or batch number; and serial number within the original part, lot, or batch number.

“Data matrix” means a two-dimensional matrix symbology, which is made up of square or, in some cases, round modules arranged within a perimeter finder pattern and uses the Error Checking and Correction 200 (ECC200) specification found within International Standards Organization (ISO)/International Electrotechnical Commission (IEC) 16022.

“Data qualifier” means a specified character (or string of characters) that immediately precedes a data field that defines the general category or intended use of the data that follows.

“DoD recognized unique identification equivalent” means a unique identification method that is in commercial use and has been recognized by DoD. All DoD recognized unique identification equivalents are listed at [http://www.acq.osd.mil/dpap/pdi/uid/iuid\\_equivalents.html](http://www.acq.osd.mil/dpap/pdi/uid/iuid_equivalents.html).

“DoD item unique identification” means a system of marking items delivered to DoD with unique item identifiers that have machine-readable data elements to distinguish an item from all other like and unlike items. For items that are serialized within the enterprise identifier, the unique item identifier shall include the data elements of the enterprise identifier and a unique serial number. For items that are serialized within the part, lot, or batch number within the enterprise identifier, the unique item identifier shall include the data elements of the enterprise identifier; the original part, lot, or batch number; and the serial number.

“Enterprise” means the entity (e.g., a manufacturer or vendor) responsible for assigning unique item identifiers to items.

“Enterprise identifier” means a code that is uniquely assigned to an enterprise by an issuing agency.

“Government’s unit acquisition cost” means—

(1) For fixed-price type line, subline, or exhibit line items, the unit price identified in the contract at the time of delivery;

(2) For cost-type or undefinitized line, subline, or exhibit line items, the Contractor’s estimated fully burdened unit cost to the Government at the time of delivery; and

(3) For items produced under a time-and-materials contract, the Contractor's estimated fully burdened unit cost to the Government at the time of delivery.

"Issuing agency" means an organization responsible for assigning a globally unique identifier to an enterprise, as indicated in the Register of Issuing Agency Codes for ISO/IEC 15459, located at [http://www.aimglobal.org/?Reg\\_Authority15459](http://www.aimglobal.org/?Reg_Authority15459).

"Issuing agency code" means a code that designates the registration (or controlling) authority for the enterprise identifier.

"Item" means a single hardware article or a single unit formed by a grouping of subassemblies, components, or constituent parts.

"Lot or batch number" means an identifying number assigned by the enterprise to a designated group of items, usually referred to as either a lot or a batch, all of which were manufactured under identical conditions.

"Machine-readable" means an automatic identification technology media, such as bar codes, contact memory buttons, radio frequency identification, or optical memory cards.

"Original part number" means a combination of numbers or letters assigned by the enterprise at item creation to a class of items with the same form, fit, function, and interface.

"Parent item" means the item assembly, intermediate component, or subassembly that has an embedded item with a unique item identifier or DoD recognized unique identification equivalent.

"Serial number within the enterprise identifier" means a combination of numbers, letters, or symbols assigned by the enterprise to an item that provides for the differentiation of that item from any other like and unlike item and is never used again within the enterprise.

"Serial number within the part, lot, or batch number" means a combination of numbers or letters assigned by the enterprise to an item that provides for the differentiation of that item from any other like item within a part, lot, or batch number assignment.

"Serialization within the enterprise identifier" means each item produced is assigned a serial number that is unique among all the tangible items produced by the enterprise and is never used again. The enterprise is responsible for ensuring unique serialization within the enterprise identifier.

"Serialization within the part, lot, or batch number" means each item of a particular part, lot, or batch number is assigned a unique serial number within that part, lot, or batch number assignment. The enterprise is responsible for ensuring unique serialization within the part, lot, or batch number within the enterprise identifier.

"Type designation" means a combination of letters and numerals assigned by the Government to a major end item, assembly or subassembly, as appropriate, to provide a convenient means of differentiating between items having the same basic name and to indicate modifications and changes thereto.

"Unique item identifier" means a set of data elements marked on items that is globally unique and unambiguous. The term includes a concatenated unique item identifier or a DoD recognized unique identification equivalent.

"Unique item identifier type" means a designator to indicate which method of uniquely identifying a part has been used. The current list of accepted unique item identifier types is maintained at [http://www.acq.osd.mil/dpap/pdi/uid/uii\\_types.html](http://www.acq.osd.mil/dpap/pdi/uid/uii_types.html).

(b) The Contractor shall deliver all items under a contract line, subline, or exhibit line item.

(c) *Unique item identifier.*

(1) The Contractor shall provide a unique item identifier for the following:

(i) Delivered items for which the Government's unit acquisition cost is \$5,000 or more, except for the following line items:

Contract Line, Subline, or

Exhibit Line Item Number Item Description

Insert

Insert

Insert

(ii) Items for which the Government's unit acquisition cost is less than \$5,000 that are identified in the Schedule or the following table:

Contract Line, Subline, or

Exhibit Line Item Number Item Description



Insert

Insert

Insert

*(If items are identified in the Schedule, insert “See Schedule” in this table.)*

(iii) Subassemblies, components, and parts embedded within delivered items, items with warranty requirements, DoD serially managed repairables and DoD serially managed nonrepairables as specified in Attachment Number \_\_\_\_\_.

(iv) Any item of special tooling or special test equipment as defined in FAR 2.101 that have been designated for preservation and storage for a Major Defense Acquisition Program as specified in Attachment Number \_\_\_\_\_.

(v) Any item not included in (i), (ii), (iii), or (iv) for which the contractor creates and marks a unique item identifier for traceability.

(2) The unique item identifier assignment and its component data element combination shall not be duplicated on any other item marked or registered in the DoD Item Unique Identification Registry by the contractor.

(3) The unique item identifier component data elements shall be marked on an item using two dimensional data matrix symbology that complies with ISO/IEC International Standard 16022, Information technology – International symbology specification – Data matrix; ECC200 data matrix specification.

(4) *Data syntax and semantics of unique item identifiers.* The Contractor shall ensure that—

(i) The data elements (except issuing agency code) of the unique item identifier are encoded within the data matrix symbol that is marked on the item using one of the following three types of data qualifiers, as determined by the Contractor:

(A) Application Identifiers (AIs) (Format Indicator 05 of ISO/IEC International Standard 15434), in accordance with ISO/IEC International Standard 15418, Information Technology – EAN/UCC Application Identifiers and Fact Data Identifiers and Maintenance and ANSI MH 10.8.2 Data Identifier and Application Identifier Standard.

(B) Data Identifiers (DIs) (Format Indicator 06 of ISO/IEC International Standard 15434), in accordance with ISO/IEC International Standard 15418, Information Technology – EAN/UCC Application Identifiers and Fact Data Identifiers and Maintenance and ANSI MH 10.8.2 Data Identifier and Application Identifier Standard.

(C) Text Element Identifiers (TEIs) (Format Indicator 12 of ISO/IEC International Standard 15434), in accordance with the Air Transport Association Common Support Data Dictionary; and

(ii) The encoded data elements of the unique item identifier conform to the transfer structure, syntax, and coding of messages and data formats specified for Format Indicators 05, 06, and 12 in ISO/IEC International Standard 15434, Information Technology – Transfer Syntax for High Capacity Automatic Data Capture Media.

(5) *Unique item identifier.*

(i) The Contractor shall—

(A) Determine whether to—

(1) Serialize within the enterprise identifier;

(2) Serialize within the part, lot, or batch number; or

(3) Use a DoD recognized unique identification equivalent (e.g. Vehicle Identification Number); and

(B) Place the data elements of the unique item identifier (enterprise identifier; serial number; DoD recognized unique identification equivalent; and for serialization within the part, lot, or batch number only: original part, lot, or batch number) on items requiring marking by paragraph (c)(1) of this clause, based on the criteria provided in MIL-STD-130, Identification Marking of U.S. Military Property, latest version;

(C) Label shipments, storage containers and packages that contain uniquely identified items in accordance with the requirements of MIL-STD-129, Military Marking for Shipment and Storage, latest version; and

(D) Verify that the marks on items and labels on shipments, storage containers, and packages are machine readable and conform to the applicable standards. The contractor shall use an automatic identification technology device for this verification that has been programmed to the requirements of Appendix A, MIL-STD-130, latest version.

(ii) The issuing agency code—

(A) Shall not be placed on the item; and

(B) Shall be derived from the data qualifier for the enterprise identifier.

(d) For each item that requires item unique identification under paragraph (c)(1)(i), (ii), or (iv) of this clause or when item unique identification is provided under paragraph (c)(1)(v), in addition to the information provided as

part of the Material Inspection and Receiving Report specified elsewhere in this contract, the Contractor shall report at the time of delivery, as part of the Material Inspection and Receiving Report, the following information:

- (1) Unique item identifier.
- (2) Unique item identifier type.
- (3) Issuing agency code (if concatenated unique item identifier is used).
- (4) Enterprise identifier (if concatenated unique item identifier is used).
- (5) Original part number (if there is serialization within the original part number).
- (6) Lot or batch number (if there is serialization within the lot or batch number).
- (7) Current part number (optional and only if not the same as the original part number).
- (8) Current part number effective date (optional and only if current part number is used).
- (9) Serial number (if concatenated unique item identifier is used).
- (10) Government's unit acquisition cost.
- (11) Unit of measure.
- (12) Type designation of the item as specified in the contract schedule, if any.
- (13) Whether the item is an item of Special Tooling or Special Test Equipment.
- (14) Whether the item is covered by a warranty.

(e) For embedded subassemblies, components, and parts that require DoD item unique identification under paragraph (c)(1)(iii) of this clause or when item unique identification is provided under paragraph (c)(1)(v), the Contractor shall report as part of the Material Inspection and Receiving Report specified elsewhere in this contract, the following information:

- (1) Unique item identifier of the parent item under paragraph (c)(1) of this clause that contains the embedded subassembly, component, or part.
- (2) Unique item identifier of the embedded subassembly, component, or part.
- (3) Unique item identifier type.\*\*
- (4) Issuing agency code (if concatenated unique item identifier is used).\*\*
- (5) Enterprise identifier (if concatenated unique item identifier is used).\*\*
- (6) Original part number (if there is serialization within the original part number).\*\*
- (7) Lot or batch number (if there is serialization within the lot or batch number).\*\*
- (8) Current part number (optional and only if not the same as the original part number).\*\*
- (9) Current part number effective date (optional and only if current part number is used).\*\*
- (10) Serial number (if concatenated unique item identifier is used).\*\*
- (11) Description.

\*\* Once per item.

(f) The Contractor shall submit the information required by paragraphs (d) and (e) of this clause as follows:

(1) End items shall be reported using the receiving report capability in Wide Area WorkFlow (WAWF) in accordance with the clause at [252.232-7003](#). If WAWF is not required by this contract, and the contractor is not using WAWF, follow the procedures at <http://dodprocurementtoolbox.com/site/uidregistry/>.

(2) Embedded items shall be reported by one of the following methods—

(i) Use of the embedded items capability in WAWF;

(ii) Direct data submission to the IUID Registry following the procedures and formats at <http://dodprocurementtoolbox.com/site/uidregistry/>; or

(iii) Via WAWF as a deliverable attachment for exhibit line item number (*fill in*) \_\_\_\_, Unique Item Identifier Report for Embedded Items, Contract Data Requirements List, DD Form 1423.

(g) *Subcontracts*. If the Contractor acquires by subcontract, any item(s) for which item unique identification is required in accordance with paragraph (c)(1) of this clause, the Contractor shall include this clause, including this paragraph (g), in the applicable subcontract(s), including subcontracts for commercial items.

(End of clause)

**DFARS 252.244-7000 SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DOD CONTRACTS). (JUN 2013)**

(a) The Contractor is not required to flow down the terms of any Defense Federal Acquisition Regulation Supplement (DFARS) clause in subcontracts for commercial items at any tier under this contract, unless so specified in the particular clause.

(b) While not required, the Contractor may flow down to subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligation.

(c) The Contractor shall include the terms of this clause, including this paragraph (c), in subcontracts awarded under this contract, including subcontracts for the acquisition of commercial items.

(End of clause)

**ATTACHMENT 1 – PERFORMANCE SPECIFICATIONS**

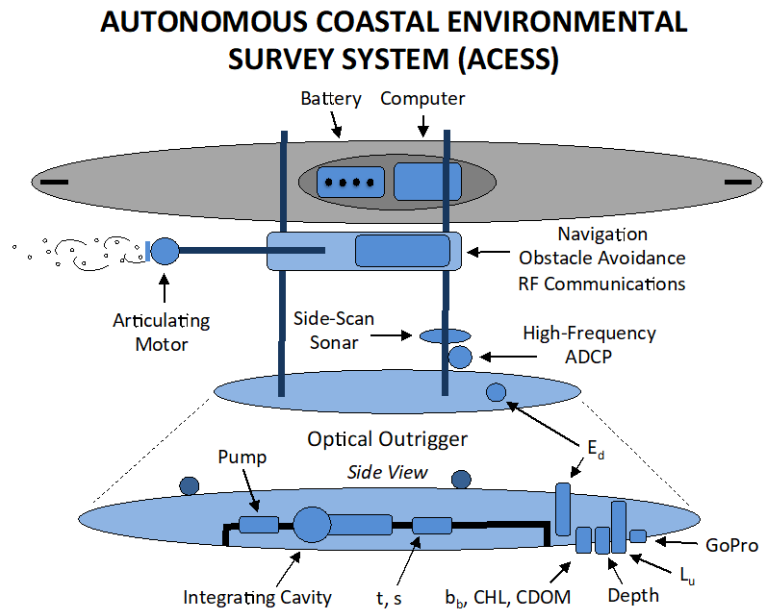
**Specifications**

**G-1 1 INTRODUCTION**

**1.1 Background**

The Naval Research Laboratory (NRL) seeks an Autonomous Coastal Environmental Survey System (ACCESS) capable of measuring a diverse array of optically active environmental parameters in shallow coastal ocean environments in high spatial resolution, including bathymetry, benthic properties, water column constituents, and hyperspectral radiometry. The system will provide its own propulsion and navigation. All sensors must be coordinated with onboard computers and all data streams logged as time-stamped, calibrated parameters. The system will maintain constant communication with a remote operator handset, be capable of manual control, be able to receive and implement survey parameter updates, and have basic obstacle avoidance capabilities. Finally, the system must be easily disassembled for transportation and assembled for operation at remote locations.

ACCESS is envisioned as an outrigger design, where the main buoyance and stability is supplied by a typical recreational, sea-going kayak (see Figure 1). All environmental sensors will be either attached to the outrigger arms (OA) or incorporated into the outrigger pontoon (OP) in order to minimize the perturbing effects of the kayak. Electrical power will be supplied by one or more conventional 12 V marine batteries and the system will be capable of continuous operation for a minimum period of 6 hours. The idea is for all components of the outrigger system, including sensors, computers, and propulsion to fit into a small number of shipping cases, each of which can be handled by one or two people. For field deployment, the outrigger system will be easily assembled, attached to a kayak (either the one supplied and listed as a deliverable or a locally rented model), and powered by rechargeable batteries that can either be shipped to or easily obtained at the field location. This kayak-based concept is notional and it is understood that other designs are possible that meet the specified requirements of portability.



**Figure 1: Notional configuration of the ACCESS system for autonomously surveying shallow water coastal environments.**

## **1.2 Scope**

Proposals are encouraged that meet the minimum requirements specified and include options that enhance the transportability, data quality, and safe operation of ACCESS. The performer will be required to build, test, demonstrate, and deliver the system within 12 months of the award. The deliverable (details listed in Section 5) shall consist of a complete survey system, including sensors, communications, propulsion, power, software, kayak hull, outrigger, batteries, shipping containers, and a light-weight cart to facilitate local transport on soft terrain and storing of a completely assembled system.

## **G-2 2 APPLICABLE DOCUMENTS**

### **2.1 Department of Defense Standards**

- None

### **2.2 Department of Defense Specifications**

- None

### **2.3 Non-government standards and other publications**

- None

## **3 Requirements**

### **3.1 System Hull Structure**

A key consideration is portability and ease of shipping. A concept based on readily-available recreational kayaks will avoid having to ship a primary hull to a study site. While other hull structures will be considered that meet the system requirements, it is anticipated that ACCESS will consist of an outrigger system that can be easily assembled and securely attached to a commercially available sea kayak without permanently modifying the kayak hull. Thus, only the outrigger system need be transportable. When assembled, the kayak and outrigger should be rigid and robust enough to be deployed from a small boat using a hoist or crane and to operate in sea conditions where the maximum wave height is  $\leq 0.5$  m. The outrigger shall be compatible with a range of typical kayak designs and shall, therefore, include versatile attachment mechanisms. The assembled survey system must be deployable from a larger vessel and, therefore, must include mechanisms (e.g., attachments and hoisting bridle/sling) for connecting to a ship winch or crane.

It is anticipated that additional mission-specific sensors will be added to ACCESS after delivery. This will primarily be accomplished by adding additional mounting brackets to the outrigger arms. Therefore, to permit the easy addition of future sensors, the OA must be both robust and reconfigurable.

### **3.2 Mission Planning and Monitoring**

**3.2.1 Hardware.** The mission planner and monitor shall be a self-powered, hand-held, water resistant, high-definition graphical device capable of sending information to and receiving information from ACCESS in real-time over an RF link. The communication range of the RF link shall be no less than 1 km over water. The display shall be operator selectable and shall include the location of ACCESS, the planned survey route, percent survey completed, ACCESS direction and speed, water depth below the keel, and selected sensor data streams. Manual control of ACCESS direction and speed shall be accomplished with easy to use, water-resistant controls.

3.2.2 *Software*. The mission planning software shall be used to formulate and update mission parameters, including the boundaries of the survey area and the survey speed. Surveys shall be configured either as a collection of waypoints, defined as latitude and longitude coordinates, or as a polygon with a defined maximum sampling spacing. If the latter, the mission planning software should automatically compute the optimum survey path and the estimated amount of time to complete the survey. Since the system will include radiometers, the survey path should be automatically configured to avoid for the hull shadow.

### 3.3 Navigation

3.3.1 *Geo-Referencing*. ACESS location and time shall be detected using a GPS receiver. While in survey mode, the ACESS location shall be continuously recorded as time stamped GPS coordinates. Two data files containing time and location shall be constructed; 1) a comma separated text file and 2) a KML file that can be displayed in Google Earth.

3.3.2 *Propulsion*. ACESS shall be propelled using a variable speed, directional motor that is integrated into the outrigger structure. The maximum depth of the propulsion system shall extend no more than 0.5 m below the water surface. The typical survey speed of ACESS shall be 1-2 kts ( $0.5 - 1 \text{ m s}^{-1}$ ) and the maximum speed of ACESS shall be at minimum of 4 kts.

3.3.3 *Obstacle Avoidance*. Sensors and software shall be included that will detect potential obstacles during surveys and perform basic avoidance tactics, e.g., stop and/or change course, should such obstacles pose a threat to ACESS and/or survey completion. In such a case, a message shall be sent to the survey hand-held controller notifying the survey personnel of the situation and avoidance measure (e.g., vessel stopped, survey path recomputed, etc.).

3.3.4 *Kayak Hull*. While the kayak to which the outrigger is attached will generally be sourced by the user at the deployment site, it is expected that tests will be performed to identify an optimal kayak specifications and that such a kayak will be included as a deliverable.

### 3.4 Environmental Sensing

Environmental sensors shall be obtained and incorporated into ACESS, all of which will be controlled by one or more on-board computers. All data shall be acquired at a minimum rate of 1 Hz and time stamped and stored for easy post survey merging with GPS data and subsequent processing. Only data acquisition, time stamping, and storage are required. All post processing procedures beyond the typical sensor(s) operation as defined by the sensor vendor(s), are included in this solicitation, but only as vendor-supplied, stand-alone software. While ACESS can be equipped with a variety of sensors, the following list of observables must be included. Representative sensors are referenced with the sensor descriptions, but are only suggestions and meant describe convey expected capabilities.

3.4.1. *Spectral Radiance and Irradiance*. Spectral radiometers shall be incorporated into the OP and measure simultaneously downwelling irradiance ( $\text{W m}^{-2} \text{ nm}^{-1}$ ) immediately above the water surface (altitude  $\leq 0.5 \text{ m}$ ) and upwelling radiance ( $\text{W m}^{-2} \text{ nm}^{-1} \text{ sr}^{-1}$ ) just below the water surface (depth  $\leq 0.5 \text{ m}$ ). The in-water radiance sensor shall be configured so that the sensing face of the instrument does not extend beyond the pontoon hull in order to protect it from abrasion and damage. The radiometers shall be positioned in the forward portion of the OP so as to minimize the impact of hull shadowing. The radiometers shall record light intensity within the minimum spectral range of between 400 nm and 900 nm and with a spectral resolution of  $\leq 5 \text{ nm}$ . Both sensors will be enclosed in watertight casings, each

with a maximum depth rating of  $\geq 100$  m. A representative sensor is the SeaBird Scientific HyperOCR Radiometer (<https://www.seabird.com>).

3.4.2. *High Definition Video.* Underwater, high definition, color video will be collected with a field of view coinciding with the in-water radiometer. This will require that the video camera be positioned close to the in-water radiometer and aligned with the radiometer axis.

3.4.3. *Water Properties.* Water column properties shall be measured with in situ sensors incorporated within the OP. Sensors can be configured to measure ambient water adjacent to the pontoon hull or with sensors positioned within the hull and designed to sample water pumped through the hull. For an ambient sensor, the face of the sensor must not extend beyond the hull surface in order to protect it from abrasion and damage and avoid creating too much drag. All ambient sensors and the sample water intake for all internal sensors shall be positioned close to the in-water radiometer without impacting the radiometer operation.

3.4.3.1 *Pigment Concentration.* The concentration of waterborne photosynthetic pigments (e.g., total chlorophyll *a*, phycocyanin, and phycoerythrin) shall be measured in situ with a minimum range of 0 - 10 mg m<sup>-3</sup>. It is expected that the sensors will be configured in flow-through mode within the hull of the OP. A representative sensor is the YSI Multiparamater Sonde (<https://www.ysi.com>).

3.4.3.2 *Dissolved Organic Matter.* The relative concentration of dissolved organic matter (DOM) shall be measured fluorometrically. It is expected that the sensor will be configured in flow-through mode within the hull of the OP. A representative sensor is the YSI Multiparamater Sonde (<https://www.ysi.com>).

3.4.3.3 *Multi-spectral Optical Backscatter.* In situ optical backscatter from water shall be measured at a minimum of three (3) wavelengths within the optical spectrum, e.g., 470 nm, 532 nm, and 650 nm, with a maximum sensitivity at each wavelength of 1 m<sup>-1</sup>. This sensor will likely be figured to measure ambient water. A representative sensor is the SeaBird Scientific ECO b<sub>6</sub> (<https://www.seabird.com>).

3.4.3.4 *Turbidity.* Water turbidity shall be measured. It is expected that the sensors will be configured in flow-through mode within the hull of the OP. A representative sensor is the YSI Multiparamater Sonde (<https://www.ysi.com>).

3.4.3.5. *Water pH.* Water pH shall be measured. It is expected that the sensor will be configured in flow-through mode within the hull of the outrigger. A representative sensor is the YSI Multiparamater Sonde (<https://www.ysi.com>).

3.4.3.6. *CDOM Concentration.* A direct measurement or proxy for colored dissolved organic matter concentration shall be measured. It is expected that the sensor will be configured in flow-through mode within the hull of the OP. A representative sensor is the YSI Multiparamater Sonde (<https://www.ysi.com>).

3.4.3.7. *Water Dissolved Oxygen.* Dissolved oxygen shall be measured. It is expected that the sensor will be configured in flow-through mode within the hull of the OP. A representative sensor is the YSI Multiparamater Sonde (<https://www.ysi.com>).

3.4.3.8 *Water Temperature.* Water temperature shall be measured within the range 0 - 40°C and with a minimum measurement accuracy of  $\pm 0.01^\circ\text{C}$ . It is expected that the sensors will be

configured flow-through mode within the hull of the OP. A representative sensor is the YSI Multiparameter Sonde (<https://www.ysi.com>).

3.4.3.9 *Water Salinity*. Water salinity shall be measured within the range 0 - 40 psu and with a minimum measurement accuracy of  $\pm 0.01$  psu. It is expected that the sensors will be configured flow-through mode within the hull of the OP. A representative sensor is the YSI Multiparameter Sonde (<https://www.ysi.com>).

**E-2** 3.4.3.10. *CURRENTS*. VERTICALLY RESOLVED CURRENTS SHALL BE MEASURED USING A DOWN-LOOKING, HIGH-FREQUENCY ACOUSTIC DOPPLER CURRENT PROFILER (ADCP). THE INSTRUMENT FACE SHALL BE NO DEEPER THAN 0.25 M AND MAY BE INCORPORATED INTO THE OP OF FIXED TO THE FORWARD OA. A REPRESENTATIVE SENSOR IS THE AQUADOPP PROFILER 2 MHZ ([WWW.NORTEKGROUP.COM](http://WWW.NORTEKGROUP.COM)).

3.4.4 *Benthic Properties*. The physical characteristics of the bottom beneath the OP (e.g., depth, bathymetry, and roughness) shall be measured using low-power acoustical sensors that are either incorporated into the OP or attached to the OA.

3.4.4.1 *Bottom Depth*. Bottom depth shall be measured acoustically directly under the in-water radiometer and therefore incorporated into the OP. The depth range of the sensor shall be a minimum of 100 m and the accuracy of the depth measurement shall be at least  $\pm 0.1$  m. A representative sensor is the Teledyne Benthos PSA-916 Sonar Altimeter ([www.benthos.com](http://www.benthos.com)).

3.4.4.2. *Bathymetry*. The physical characteristics of the bottom (bathymetry and roughness) shall be measured using a side scan sonar imager that is either incorporated into the OP or attached to the OA. The imager shall operate within a water depth range of at least 1 - 100 m and operate with an accuracy at least  $\pm 0.1$  m. A representative sensor is the Lowrance StructureScan 3-D side-scan sonar (<https://www.lowrance.com>).

### 3.5 Sensor Operation

All sensors must be easily configurable prior to a survey operation and easily started and stopped wirelessly using the hand-held controller. The controller must include indicators that verify the operating state of each sensor, e.g., on or off.

### 3.6 Accessibility

All components of the system shall be accessible under normal field conditions in order to facilitate system maintenance, sensor calibration, and component replacement. For example, disassembly of the OP must be possible to the extent that the incorporated sensors are accessible.

### 3.7 Portability

3.7.1 *Shipping and Storage*. The system shall be easily assembled and disassembled and the disassembled parts shall fit conveniently within protective shipping containers, e.g., Pelican Cases ([www.thepelicanstore.com](http://www.thepelicanstore.com)) in order to permit ease of storage and shipping. Each storage/shipping case must be manageable by a maximum of two (2) people and preferably one (1) person. The number of individual shipping cases is not specified. This requirement only covers the outrigger system.



3.7.2 Local Transportation. The completely assembled ACESS shall fit on a custom, lightweight cart that can be operated by a maximum of two (2) people and preferably one (1) person. The cart should be equipped with wheels capable of operation on unconsolidated beach sand.

#### **4 Verification**

NRL personnel will conduct an Acceptance Test at a negotiated field location to verify that the system performance meets or exceeds the Threshold or Proposed value (whichever is closest to the Objective). The vendor shall train NRL personnel in the maintenance and operation of the ACESS and will participate in a demonstration of the system capabilities. Requirements will be verified as follows:

- Assembly of the complete ACESS system.
- Manual transportation of the assembled ACESS on land using a lightweight cart.
- Planning and construction of a test survey route.
- Navigation to the constructed survey route at the prescribed transit speed from a deployment or "home" location, survey execution at reduced survey speed, and return to home at transit speed.
- Real-time transmission and display of the ACESS location, associated navigation information, and selected data streams on the remote handset controller during the survey.
- Basic obstacle avoidance during the test survey and display of associated navigation information on the remote handset controller.
- Confirmation that the remote handset controller can communicate across the prescribed distance.
- Confirmation that all sensors operated during the complete demonstration survey and that the associated data was appropriately time stamped and stored.
- Confirmation that all data can be easily accessed with appropriate software for post-survey analysis.
- Disassembly of the ACESS and storage of components within vendor-supplied shipping/storage cases.

#### **5 Deliverables**

- Attachable Outrigger (OA + OP) System
- Kayak Hull
- Transport Cart
- Communications Hardware and Software
- Remote Control Handset with Display
- Navigation and Propulsion Hardware and Software
- Obstacle Avoidance Sensors and Hardware
- Environmental Sensors & Software
- Sensor Control Computers and Software
- Data Storage Hardware and Software
- Shipping and Storage Containers

**G-1 APPENDIX A - ACRONYMS**

ADCP	Acoustic Doppler Current Profiler
DOM	Dissolved Organic Matter
GPS	Global Positioning System
KML	Keyhole Markup Language
NRL	Naval Research Laboratory
OA	Outrigger Arm Assembly
OP	Outrigger Pontoon
RF	Radio Frequency
ACCESS	Autonomous Coastal Environmental Survey System

## ATTACHMENT 2 – TECHNICAL EVALUATION CRITERIA

All proposals will be evaluated against the following criteria:

- 1) Completeness of capabilities specified within the performance specifications in Attachment 1, including system portability, mission planning and monitoring, navigation accuracy, environmental sensing, system operation, and component/sensor access.
- 2) The following sensor minimum requirements must be met in order to be considered responsive to the solicitation:

Minimum Communication Range:	1 km
Location:	+/- 4 m
Max Speed:	5 kts
Sensor Sampling Rate:	1 Hz
Acoustic Bottom Depth Sounder Range:	0 – 100 m
Acoustic Bottom Depth Sounder Accuracy:	+/- 0.1 m
Radiance/Irradiance Spectral Range:	350 – 800 nm
Radiometer Spectral Sampling:	5 nm
Radiometer Depth Rating:	100 m
Pigment Concentration Accuracy:	+/- 0.1 mg/m <sup>3</sup>
Optical Backscatter Accuracy:	+/- 0.1 m <sup>-1</sup>
Dissolved Oxygen Accuracy:	+/- 1% Saturation
pH Accuracy:	+/- 0.1 pH units
Turbidity Accuracy:	+/- 5% of reading
CDOM Fluorescence Accuracy:	300 ppb QSE
Salinity:	+/- 0.05 psu
Water Temperature:	+/- 0.005 °C
Current Velocity Range:	+/- 10 ms <sup>-1</sup>
Current Velocity Accuracy:	+/- 1% of reading
Current Profiling Depth Range:	0 – 10 m.