#### BAA Call N00014-22-S-C007

## Special Program Announcement for Office of Naval Research Research Opportunity: "Next Generation Medium Tactical Truck (NG-MTT) Research"

## I. INTRODUCTION

This announcement describes a proposal opportunity for the Advanced Ground and Amphibious Platforms S&T Program under Advanced Naval Platforms (ONR Code 33, https://www.onr.navy.mil/Science-Technology/Departments/Code-33/All-Programs/331-advanced-naval-platforms). Participation in this opportunity is available under the N00014-22-S-B001, Long Range Broad Agency Announcement for Navy and Marine Corps Science and Technology, which can be found at <a href="https://www.onr.navy.mil/en/work-with-us/funding-opportunities/announcements">https://www.onr.navy.mil/Science-Technology/Departments/Code-33/All-Programs/331-advanced-naval-platforms</a>). Participation in this opportunity is available under the N00014-22-S-B001, Long Range Broad Agency Announcement for Navy and Marine Corps Science and Technology, which can be found at <a href="https://www.onr.navy.mil/en/work-with-us/funding-opportunities/announcements">https://www.onr.navy.mil/en/work-with-us/funding-opportunities/announcements</a>. The submission of proposals, their evaluation(s), and the placement of research contracts will be carried out as described in the above Long Range Broad Agency Announcement.

The purpose of this announcement is to focus attention of the scientific community on (1) the technology area to be studied, and (2) the planned timetable for the submission of full proposals.

### II. TOPIC DESCRIPTION

The Next Generation Medium Tactical Truck (NG-MTT) research program is an ONR applied research and advanced technology development effort for the Advanced Ground and Amphibious Platforms S&T portfolio. The proposed topic will support research efforts to explore and exploit advanced as well as next generation technologies and concepts in the areas of platform architecture, hybrid/electrification, powertrain efficiency, and intelligent mobility, amongst others, to inform the realm of the possible related to a notional follow-on to the current Marine Corps Medium Tactical Vehicle Replacement (MTVR). This follow-on platform, called the Next Generation-Medium Tactical Truck (NG-MTT), is envisioned to be a smaller, lighter, more transportable, fuel-efficient, highly mobile, safe, reliable, digitally enabled, and flexible system. To address the demands of Force Design 2030, ONR is researching the benefits of a hybrid-electric system that can provide exportable power as well as be configurable, modular, and adaptable for future upgrades and technology insertions. The goal of this research program is to push the state of the art to inform the requirements development process and to engage Industry and Academia early in the process.

#### **Background:**

The Marine Corps is considering a possible future replacement for the currently fielded Medium Tactical Vehicle Replacement (MTVR). The MTVR is a ground transport logistics vehicle that is mobile, reliable, and flexible. The MTVR is the primary system to deliver a large range of supplies to forward-deployed units, in addition to a wide range of other missions, and is considered the "workhorse" of the Marine Corps. It fills the gap between the light vehicle fleet

BAA Call Number N00014-22-S-C007

and the heavy vehicle fleet. While the MTVR is not a fighting vehicle, it performs vital logistical functions essential to overall success in any combat scenario.

There are five variants of the current MTVR:

- Cargo, 6x6 (standard and extended wheelbase)
- Dump, 6x6
- High Mobility Artillery Rocket System (HIMARS) Resupply Vehicle, 6x6
- Wrecker, 6x6
- Tractor, 6x6

These variants perform the following functions:

- Artillery prime mover
- Transport of troops and equipment
- Bulk cargo and ammunition hauler
- HIMARS rocket resupply
- Water and fuel container transport
- Shelter transport
- Dump capability
- Wrecker/retriever

#### **Objective:**

The NG-MTT research program will not consider an incremental upgrade to the MTVR but rather new designs/concepts considering advanced technologies and approaches. Some of the capabilities envisioned include, but are not limited to:

- A smaller and lighter platform for enhanced expeditionary transport
- Hybrid Electric drive for reduced fuel consumption, extended range, and ability to export power to support high power payloads
- Interoperability, modularity and open systems architecture for future upgrades
- Robust cross-country and on-road land mobility with water fording capability
- Drive-by-wire capability to support manned and un-manned teaming
- Ability to change/upgrade force protection and survivability levels
- Advanced condition based maintenance, reliability, durability, and corrosion protection

Three next generation Medium Tactical Truck (MTT) variants are envisioned; 1) Base, 10 ft Bed MTT, 2) 14 ft Bed MTT, and 3) 20 ft Bed MTT. Table 1 provides a breakout of desired capabilities for each of the three variants.

The goal of the Base, 10 ft Bed, MTT cargo variant is to be highly transportable through reduced size and weight. It is desired that a modular and scalable design approach be taken such that the Base MTT can be modified/upgraded to provide the desired capabilities for the 14 and 20 ft variants. Concepts such as extendable frame rails, addition of a third axle, powered electric axles/modules/hubs, enhancements to the powerplant, etc. should all be evaluated. Maximizing commonality between the three variants should be a design objective and it is desired that

modifications take between 30-60 days at the Depot-level, or 5<sup>th</sup> echelon of maintenance, away from the battlefield. Modifications between variants is not anticipated to occur in field settings due to potentially requiring modifications or swapping of the primary propulsion system and drivetrain to accommodate the differing load capacities.

The focus of the research program should be on the overall design of an innovative and novel lightweight 10 ft bed platform with design features to enable the platform to be upgraded/altered to the 14 ft and 20 ft bed variants.

Table 1 below presents desired capability information for the three envisioned variants. These are notional capabilities and all are tradeable during the concepting and technology trade study portion of the research program.

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Capability	BASE NG-MTT (10 ft Bed)	NG-MTT (14 ft Bed)	NG-MTT (20 ft Bed)
Crew	Must accommodate 3 combat equipped passengers (Driver, A-driver, Gunner)		
Payload	Unarmored: (T) 12,000 lbs (O) (12,000 lbs) (primary/secondary roads) (T) 8,000 lbs (O) (8,000) (all terrain) Armored: (T) TBD (O) 12,000 lbs (primary/secondary roads) (T) TBD (O) 8,000 lbs (all terrain) Payloads up to 12k lbs on road and 8k lbs off-road (OMS/MP) with a max GCVW (refer to trailer towing) not to exceed 65k lbs Cargo Bed width (T) 96". Must be able to transport (T) 2 quadcons (Per: 58"L x 96"W x 82"H) / (T) 1 sixcon (77"W x 96"L x 47.4"H) Capable of sixcon tie down. Cargo bed/space configurable for (10) combat equipped passengers for transport.	Unarmored: (T) TBD (O) 30,000 lbs (primary/secondary roads) (T) TBD (O) 14,200 lbs (all terrain) Armored: (T) TBD (O) 21,000 lbs (primary/secondary roads) (T) TBD (O) 12,000 lbs (all terrain) Self load capability equal to or greater capacity than that of the current truck. Consider innovative self-loading capabilities in addition to cranes, focused on minimizing system SWAP. Retain modular armor but target lower GVW while carrying MFoM missile payloads (10,400) Cargo Bed width (T) 96". Must be able to transport (T) 2 quadcons (Per: 58"L x 96"W x 82"H) / (T) 2 sixcon (77"W x 96"L x 47.4"H). Must be secured via ISO locks. Capable of sixcon tie down. Cargo bed/space configurable for (16) combat equipped passengers for transport.	Unarmored: (T) TBD (O) 30,000 lbs (primary/secondary roads) (T) TBD (O) 14,200 lbs (all terrain) Armored: (T) TBD (O) 21,000 lbs (primary/secondary roads) (T) TBD (O) 12,000 lbs (all terrain) Equal to or greater capacity than that of the current MTVR. Retain modular armor but target lower GVW while carrying MFoM missile payloads (10,400) Cargo Bed width (T) 96". Must be able to transport (T) 4 quadcons (Per: 58"L x 96"W x 82"H) / (T) 3 sixcon (77"W x 96"L x 47.4"H); 20ft ISO container. Must be secured via ISO locks. Capable of sixcon tie down. Cargo bed/space configurable for (20) combat equipped passengers for transport.

Capability	BASE NG-MTT (10 ft Bed)	NG-MTT (14 ft Bed)	NG-MTT (20 ft Bed)
Dimensions	Length: (T) ≤ 295" (O) ≤ 264" Width: (T) ≤ 100" (O) ≤ 98" Height: (T) ≤ 120" (O) ≤ 98"	Length: (T) ≤ 316" (O) ≤ 285" Width: (T) ≤ 100" (O) ≤ 98" Height: (T) ≤ 120" (O) ≤ 98"	Length: (T) ≤ 387" (O) ≤ 356" Width: (T) ≤ 100" (O) ≤ 98" Height: (T) ≤ 120" (O) ≤ 98"
Weight	CW (Unarmored): (T) $\leq$ 22k lbs CW (Armored): (T) $\leq$ 28k lbs GVWR: $\leq$ 65k lbs	CW (Unarmored): (T) $\leq$ 28k lbs CW (Armored): (O) $\leq$ 28k lbs CW (Armored): (T) $\leq$ 36k lbs GVWR (Armored): $\leq$ 65k lbs	CW (Unarmored): (T) $\leq 28k$ lbs CW (Armored): (O) $\leq 28k$ lbs CW (Armored): (T) $\leq 36k$ lbs GVWR (Armored): $\leq 65k$ lbs
Trailer Towing	<ol> <li>Capable of towing from a rear pintle with selected trailer of up to 22k lbs measured over OMS/MP</li> <li>Tongue weight up to 4k lbs</li> <li>Capable of towing current medium/standard trailers (e.g., MTVR-T family: Cargo Variant, Water Variant, and General Purpose Chassis Variant) to include the JLTV- Trailer</li> <li>Capable of towing like or similar vehicles</li> <li>Provisions for providing power to towed trailer</li> </ol>	<ol> <li>Capable of towing from a rear pintle with selected trailer of (T) 22K lbs; (T) 33k lbs</li> </ol>	
Modularity	<ol> <li>Platform is designed to be modular and scalable from base configuration to longer bed variants</li> <li>Primary power system shall be scalable to support higher payload capacity of 14-20ft variants</li> <li>Common components for a 2 and 3 axle configuration / common driveline components for further electrification tech insertion</li> <li>Retain modular armor, but target lower GVW while carrying MFoM missile payloads (HiMARS, PrISM, PLRF) Field level</li> <li>Cargo bed/space configurable for (10) combat equipped passengers for transport.</li> </ol>		

Capability	BASE NG-MTT (10 ft Bed)	NG-MTT (14 ft Bed)	NG-MTT (20 ft Bed)	
Fording	Capable of fording in fresh or salt water: (T) 42" without kit, 60" with kit; (O) 60" without kit	Capable of fording in fresh or salt water:	(T) 60"	
	Fully operational upon exiting fording operations, without damage to the vehicle systems			
Environmental	<ol> <li>The asset in its fully operational configuration, inclusive of armor, subsystems and subcomponents, shall not degrade beyond stage 2 corrosion after completion of a 26-year Accelerated Corrosion/Durability Road Test. Upon completion of the 26 year accelerated corrosion durability road test, all electrical, electronic, hydraulic, pneumatic, and hydro-pneumatic systems shall remain functional.</li> <li>-25°F to 125°F Operational Temperatures [-26°F to -50 °F ISO OPLAN / with winterization kit] Performance Input: All power systems, power distribution sources, and power storage units shall remain functional and shall exhibit no corrosion greater than stage 1 when subjected to the 26 year accelerated corrosion durability road test in its operational format.</li> </ol>			
Survivability/Threat	<ol> <li>Modular/scalable armor w/JLTV threat requirements (B-Kit level protection with underbody Armor). Must be able to be removed and install at the field level (unit); incorporate lift and access (fluid checks, drain, and fill) points. Armored variant must integrate GPK or roof hatch. Shall be capable of having modular armor installed/uninstalled by three trained Marines (MHE operator and mechanics), in less than six hours using common tools (General Mechanics Tool Box, MHE, impact wrench, BII, and/or those tools provided with the B-kits; no additional special tool)</li> <li>Require AFES.</li> </ol>			

Capability	BASE NG-MTT (10 ft Bed)	NG-MTT (14 ft Bed)	NG-MTT (20 ft Bed)
Transportability	<ol> <li>Air Transport:         <ul> <li>Air Transport:</li> <li>C-130 internal air transport (Applies to unarmored curb weight MTT/MIL-STD 1366E ; With no more than 2 Marines/60 minutes of preparation</li> <li>CH-53E external lift (Not To Exceed: (T) 28K lbs; desire to transport at curb weight. Lift point based on MIL-STD-209K &amp; 913A Armored vehicles not required to meet.</li> <li>CH-53K (T) 36K lbs; desire to transport at curb weight (armored)</li> </ul> </li> <li>Rail Transport: European GIC rail requirement for reducible height cabs (cabs reduce to 98"). Non-reducible height cabs only required to meet American AAR rail requirement. Reducible Height Cabs or other approaches. With no more than 2 Marines / 40 minutes of preparation time (consists of the driver and an assistant to lower the cab)</li></ol>		
Fuel Efficiency	<ol> <li>GVWR-6 mpg (threshold) measured over the OMS/MP and will include 50% idle time / GVWR-12 mpg (objective) measured over the OMS/MP and will include 50% idle time.</li> <li>Integrate Hybrid Electrification that also increases range and that facilitates future technological advances.</li> <li>Anti-Idle / silent watch / drive capability: Capable of running critical systems (HVAC, C5I assets) for a minimum of (T) 2 hours (O) 4 hours with engine off</li> </ol>		
Mobility	<ol> <li>OMS/MP: 70% Off-road, 30% On road</li> <li>Soft Soil Mobility VCI: Will be equal to or better than that of the current MTVR. (Current VCIs: 28 unarmored; 31 armored to include GPK / May only be associated with 14-20ft variants)</li> <li>Integrate state of the art safety, stability control system in order to mitigate vehicle accidents i.e rollovers, traction, etc.</li> <li>Tire snow chain compatability</li> <li>60% longitudinal grade; 30% side slope</li> </ol>		
EMI/EMC	Must meet current standard set forth in: MIL-STD-461D and MIL-STD-462D: CE102, CS101, CS114, RE102, RS103)		

Capability	BASE NG-MTT (10 ft Bed)	NG-MTT (14 ft Bed)	NG-MTT (20 ft Bed)	
Signature Management	<ol> <li>Must be designed to meet minimum thermal, acoustic, and EM signatures         <ul> <li>Must minimize the ability to detect, identify, or acquire across the acoustic spectrums by limiting external noise level to 85dBA</li> <li>0 meters (T) and 80dBA @ 30 meters (O), as well as across the EM spectrum to include visual, near Infrared (IR) and IR (O) / Protect on-board instruments from sound-induced vibrations</li> </ul> </li> </ol>			
Exportable Power	@ 30 meters (T) and 80dBA @ 30 meters (O), as well as across the EM spectrum to include visual, near Infrared (IR) and IR (O) /			

Capability	BASE NG-MTT (10 ft Bed)	NG-MTT (14 ft Bed)	NG-MTT (20 ft Bed)
Human Factor Engineering	<ol> <li>Shall be operable and maintainable by the full range of military personnel (2nd percentile female through 98th percentile male as defined in 2010 Anthropometric Survey of U.S. Marine Corps Personnel: Methods and Summary Statistics wearing the full range of clothing, to include Arctic cold weather and NBC MOPP-4.</li> <li>Field of View: SAE-J941, SAE-J198, Ground Intercept: (T) 35 ft &amp; (O) 25 ft</li> <li>System must be designed to meet MIL-STD 1472H</li> <li>All vehicles, without kits but with cargo cover, shall attain no more than 6 watts average vertical absorbed power at the driver's station while negotiating a 1.0 inch (2.5 cm) RMS course at speeds up to 27 mph (43 kph), a 1.5 in (3.8 cm) RMS course at speeds up to 20 mph (32 kph), a 2.0 inch (5.1 cm) RMS course at speeds up to 15 mph (24 kph) and a 3.0 in (7.6 cm) RMS course at speeds up to 5 mph (8 kph) with tires at the normal cross country inflation pressure. All vehicles, without kits but with cargo cover, shall attain no more than 6 male as a speeds up to 20 mph (32 kph) and a half round obstacle of 12 inch (30 cm) height at speeds up to 10 mph (16 kph) with tires at normal cross country inflation pressure.</li> </ol>		
High Voltage	<ol> <li>Integrated HV system shall be capable of safely fording the vehicle to the (O) 60" requirement, without a loss in platform capability.</li> <li>All electrical systems over 48 volts must be able to ford in the environment. All electrical connections and components for voltages over 48 volts shall be IP 68 or higher. All systems over 48 volts power sources, wiring, and possible paths to ground are completely isolated (using physical barriers) and cannot be reached or come in contact with occupants, emergency services personnel, or cab interior. Warnings for high voltage systems shall notify the occupants when an electrical fault has occurred.</li> </ol>		
Operational Availability and Maintenance	<ol> <li>OA &gt; 85% Field and Depot PM and CM</li> <li>Provide two maintenance approaches to achieving Operational Availability in the distributed operations:         <ul> <li>a. Simplicity in design by using fewer Line Replacement Units (LRUs) leading to repairability while accepting an increase in Time To Repair</li> <li>b. Continued application of higher number of LRUs leading to decreased Time To Repair / Continued application of Prognostics</li> </ul> </li> <li>Complies with legacy maintenance approaches and seeks opportunities for CBM+</li> </ol>		
Prognostics	<ol> <li>Embedded diagnostics system that is CBM+ enabled with on-system health monitoring; the ability to capture and analyze parametric, prognostics, diagnostic, and configuration data locally</li> <li>Integrate into the joint integrated data environment</li> <li>Must have the ability to transmit, receive, and store data locally and to the enterprise</li> <li>Must integrate with approved USMC maintenance and supply platforms (AIS) i.e. GCSS-MC, WATS, etc.</li> </ol>		

Capability	BASE NG-MTT (10 ft Bed)	NG-MTT (14 ft Bed)	NG-MTT (20 ft Bed)
	5. Shall have a sensor based, self-monitodiagnostics/prognostics to detect/preautomatically isolate to a single compaccuracy. The vehicle's embedded diagnable rapid repair of electronic fault transmission, power generation, and Plus (CBM+) compliant, providing veh with CBM+ supporting analysis system	oring, and self-reporting system both on a edict 97 percent of failures through Built-in ponent Line Replacement Unit/Line Replace agnostic/health monitoring system will disp as and failures. Electronic monitoring shall vehicle speed, included as part of the plat nicle health monitoring and self-diagnosis t	nd off the platform. Have embedded n Test/Built-in Test Equipment (BIT/BITE) and ement Module (LRU/LRM) with 99 percent play failures/alert the operator/maintainer to
	MTT FOV		

#### PROGRAM STRUCTURE

#### I. Base Phase: Concept Development and Preliminary Design (10 months)

The period of performance is ten (10) months and will consist of multiple awards amounting up to \$1,000,000 each for technology trades, concept development, and preliminary design. The concept development should address multiple concepts including the trade-off analysis and selected/recommended concepts. Utilization of physics-based models and simulations are expected for full system and sub-system analyses. This effort should result in the delivery of concepts and preliminary designs and associated M&S products for Government review and evaluation, to include completion of the provided data sheets for Government M&S mobility and propulsion analysis. Extensive use of virtual modeling and simulation is expected in the development process as well as virtual testing of targeted performance and capability goals. Also expected in this phase is an assessment of the degree of technological risks mitigation attainment and resulting benefits in performance and capability.

This effort should result in a final report fifteen (15) days prior to the end of the Base period detailing the design approach and methodology used, results of the technology survey, description and results of the technology combinatorial trade process, the various concepts developed, predicted performance/capabilities of each concept and variant, illustrations of the concepts, technological risks and mitigation approach, any models or simulations developed; and associated virtual instantiation. A final presentation covering all of the above shall be presented 15 days before contract completion.

- 1. Hold a Kick-Off meeting, monthly phone updates, an In-Process Review, and a Final review
- 2. Review documentation on current MTVR capabilities and additional documentation for NG-MTT
  - a. Government will furnish MTVR requirements documents and test reports along with preliminary documents on NG-MTT
- 3. Conduct technology surveys
- 4. Conduct combinatorial technology trades
  - a. Conduct technology development and system tradeoffs utilizing trade study or equivalent tools to assess system performance in terms of cost and weight as independent variables
- 5. Perform modeling and simulation and performance analysis a. Full system and sub-systems analysis utilizing physics-based models
- 6. Develop conceptual and preliminary design of proposed concepts/systems
  - a. Generate virtual instantiation of the designs
    - i. A Computer-Aided Design (CAD) model shall be developed for the proposed concept and delivered to the Government.

- b. Conduct virtual performance testing of the designs
- c. Develop and populate an estimated performance table for each concept
- d. Provide estimated unit cost of each concept
- 7. Generate Base Phase Report. The report shall include results of all Phase activities to include research conducted, analysis and simulations produced in the course of the effort as well as estimated unit costs for the proposed concepts/systems/variants.

#### II. Option I: Technology Demonstrator Fabrication, Build, & Test (24 months)

An option period should be included that aims to fabricate, build, and test a novel platform design that results from the Base phase. The period of performance is twenty-four (24) months to include eighteen (18) months of detailed design, fabrication, and contractor testing and six (6) months of Government test support.

This effort should result in a final report fifteen (15) days prior to the end of the Option period A final presentation shall also be presented 15 days before contract completion.

- 1. Perform detailed design
  - a. The concept developed under the Base Phase shall be matured and design activites shall be focused on the fabrication of a technology demonstrator that is capable of demonstrating the core competencies of the proposed solution within the Government testing period. Prior developed CAD model shall be updated with design refinements and delivered to the Government.
- 2. Conduct platform fabrication
- 3. Perform contractor testing
  - a. Contractor testing shall confirm the operability and safety of the developed technology demonstrator prior to delivery to the Government for subsequent Government testing. A test plan shall be developed and approved by the Government prior to the start of contractor testing and a summary report of results shall be provided after test completion.
- 4. Support government test and assessment
  - a. Test and demonstration support, including on-site field service representatives to perform maintenance and provide spare parts, is necessary to cover six (6) months of Government platform evaluation. Test events are likely to occur at multiple test sites that are geographically dispersed across the United States. Contractors must provide adequate information on the safety, operability, and operation of their developed technology demonstrators prior to government testing. This information shall be captured in a Safety Assessment Report (SAR) and an Operating Manual that is to be delivered to the Government prior to the start of Government testing.

5. Generate Option Phase Report. The report shall include results from all Phase activities to include capturing all lessons learned from detailed design, fabrication, and testing activities. Report shall also capture any updates to estimated platform unit costs.

# **III. DISTRIBUTION OF GOVERNMENT FURNISHED INFORMATION WORKSHOP - INDUSTRY DAY**

ONR does not plan to hold workshops, industry days, or webinars, etc, in support of this announcement.

## IV. WHITE PAPER SUBMISSION

ONR does not plan to solicit or receive White Papers for this effort.

## V. FULL PROPOSAL SUBMISSION AND AWARD INFORMATION

Full proposals should be submitted under N00014-22-S-B001 by 30 June 2022. Full Proposals received after that date will not be considered.

ONR anticipates that contracts will be issued for this effort.

Full proposals for contracts should be submitted in accordance with the Appendix 2 of the N00014-22-S-B001.

The period of performance for projects may be from 1 October 2022 to 30 July 2023.

Although ONR expects the above described program plan to be executed, ONR reserves the right to make changes.

Funding decisions should be made by 15 July 2022. Selected projects will have an estimated award date of 30 September 2022.

## VI. SIGNIFICANT DATES

Event	Date
Recommended Full Proposal Submission	30 June 2022
Notification of Selection: Full Proposals *	15 July 2022
Awards *	30 September 2022

Note: \* These are approximate dates.

#### **VII. Small Business Subcontracting**

As indicated in ONR Broad Agency Announcements, large businesses and non-profit organizations must submit a subcontracting plan along with their research proposal. While large businesses and non-profits are responsible for making these subcontracting arrangements, ONR will help facilitate prime contractor/small business contracting connections by posting to the ONR external website contact information of small businesses that have indicated their subcontracting interests and technological niche for prime contractor consideration for this program. This is not an endorsement, but an effort by ONR to help bring these parties together to provide superior solutions.

If you are a small business, and your company is interested in subcontracting activities with large businesses and/or non-profits considering your technology for this program, please provide the following information by email to the ONR Small Business Director at <u>ellen.simonoff@navy.mil</u> with the subject line, "SN N00014-22-S-C007". Provide this information:

Company Name and Website Individual (POC) name and POC email address Business size and socio-economic category Brief Technology Description (no more than 3 sentences) Technology Key Words (no more than 10 words)

Note: Do not include ANY proprietary information. This information will be posted on the ONR website under this BAA call and will available to the public.

## VIII. POINTS OF CONTACT

In addition to the points of contact listed in N0014-22-S-B0001 the specific points of contact for this announcement are listed below:

Technical Points of Contact: Name: Dr. Jeff Bradel Title: Program Officer Division: Advanced Naval Platforms, Code: 331 Address: Office of Naval Research, 875 North Randolph Street, Suite 276, Arlington, VA 22203-1995 Email Address: Jeffrey.a.bradel.civ@us.navy.mil

Business Point of Contact/Contracting Officer: Name: Leila Hemenway Title: Contracting Officer Address: Office of Naval Research, 875 North Randolph Street, Arlington, VA 22203-1995 Email Address: Leila.k.hemenway.civ@us.navy.mil

### VIII. SUBMISSION OF QUESTIONS

Any questions regarding this announcement must be provided to the Technical Points of Contact and/or the Business Point of Contact listed above. All questions shall be submitted in writing by electronic mail.

Answers to questions submitted in response to this BAA Call will be addressed in the form of an Amendment and will be posted to the following web pages:

- Sam.gov Webpage –Contract Opportunities <u>https://sam.gov/</u>
- ONR BAAs, FOAs and Special Program Announcements Webpage https://www.onr.navy.mil/en/work-with-us/funding-opportunities/announcements

Questions regarding **Full Proposals** should be submitted NLT two weeks before the dates recommended for receipt of Full Proposals. Questions after this date may not be answered.