AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF	PAGES
	1		29

2. AMENDMENT/MODIFICATION NUMBER	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQUISITION NUMBER	5. PROJECT NUMBER *(If applicable)*
P00002	5/3/2019		

6. ISSUED BY CODE FA8075

FA8075 AFICA KD
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CODE 9G924 FACILITY CODE

(X)

☐ 9A. AMENDMENT OF SOLICITATION NUMBER

9B. DATED *(SEE ITEM 11)*

☒ 10A. MODIFICATION OF CONTRACT/ORDER NUMBER
FA807518D0007

10B. DATED *(SEE ITEM 13)*
9/27/2018

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.

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

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

See Section G

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NUMBER AS DESCRIBED IN ITEM 14.

CHECK ONE	
☐	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NUMBER IN ITEM 10A.
☒	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation data, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
☐	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
☐	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☒ is not ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (*Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

This modification adds clarifying language to PWS Sec 4.5 for complying with the Small Business Participation Goals. The North American Industry Classification Code (NAIC) is 541715, with a size standard of 1000 employees. This modification adds by reference FAR 52.215-10 Price Reduction for Defective Certified Cost or Pricing Data (Aug 2011) and FAR 52.215-12 Subcontractor Certified Cost or Pricing Data (Class Deviation 2018-O0015) (May 2018).

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

15A. NAME AND TITLE OF SIGNER *(Type or print)*	16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*
	Stanley F. Stearns Email: stanley.stearns@us.af.mil Telephone: 402-294-4711

15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		Stanley F. Stearns *(Signature of Contracting Officer)*	5/3/2019

Previous edition unusable

STANDARD FORM 30 (REV. 11/2016)
Prescribed by GSA FAR (48 CFR) 53.243

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

Section A - Solicitation/Contract Form

The following changes have been made:

INFORMATION	FROM	TO
Size Standard - Employees	1000	

Section B - Supplies or Services & Prices or Costs

Section C - Specification/SOW/SOO/ORD

Miscellaneous text in this section has been modified to:

Descriptions and Specifications
PERFORMANCE WORK STATEMENT
INFORMATION ANALYSIS CENTER MULTIPLE AWARD CONTRACT (IAC MAC)
TABLE OF CONTENTS
SECTION 1 DESCRIPTION OF SERVICES/GENERAL INFORMATION
1.1 Background
1.2 IAC MAC Objectives
1.3 IAC MAC Mission
1.4 Technical Scope
1.5 Program Management & Reporting
1.6 General Information/Administration
1.7 Security Requirements
1.8 Publishing Requirements
1.9 Place of Performance
1.10 Pricing TOs
1.11 Designation of COR(s)/ACOR(s)
1.12 COMSEC Notice
1.13 Contractor Identification Requirements and Performance of Work on Government Premises
1.14 Permits and Responsibility for Work
SECTION 2 SERVICES SUMMARY (SS)
SECTION 3 GOVERNMENT PROPERTY
3.1 General Information
SECTION 4 OTHER TERMS AND CONDITIONS
4.1 Organizational and Consultant Conflicts of Interest (OCI)
4.2 Period of Performance for Contract and TOs
4.3 Travel and Other Direct Costs (ODCs)
4.4 Minimum Task Order Proposal Submittals
4.5 Small Business Participation Goals
4.6 On Ramps
4.7 Off Ramps

SECTION 1 -- DESCRIPTION OF SERVICES/GENERAL INFORMATION

1.1 Background.

The Department of Defense (DoD) Information Analysis Center (IAC) Program operates in accordance with (IAW) DoD Manual 3200.14 Volume 1, "Principles and Operational Parameters of the DoD Scientific and Technical Information Program: General Processes", Mar 14; and DoD Manual 3200.14 Volume 2, "Principles and Operational Parameters of the DoD Scientific and Technical Information Program: Information Analysis Centers (IACs)", Jan 15.

The DoD IAC Program Management Office (PMO), sponsored by the Defense Technical Information Center (DTIC) is responsible for administrative and operational management of all DoD IACs. Technical report number ADA 309771, "Information Analysis Centers in the Department of Defense, Jul 87", provides a detailed review of the IAC concept, the over 70-year history of the IACs and the IAC role in the collection, analysis, synthesis and dissemination of Scientific and Technical Information (STI). In addition, DoD IACs function as specialized subject focal points and centers of excellence, supplementing the DTIC services within DoD Directive 3200.12, "DoD Scientific and Technical Information (STI) Program (STIP)", Aug 13. The IACs provide the long-term institutional memory of STI for the DoD (reference the Defense Federal Acquisition Regulation Supplement (DFARS) 235.010); along with the ability to avoid duplicating STI holdings and analytical capabilities in various Research and Development (R&D) support components.

STI is defined as "Communicable knowledge or information resulting from or about the conduct and management of scientific and engineering efforts. STI is used and reused by administrators, managers, scientists, and stakeholders engaged in scientific and technical efforts, and is the basic intellectual resource for, and result of, such efforts. STI may be represented in many forms and media, including paper, electronic data, audio, photographs, video, drawings, numeric data, textual documents, etc."

The IAC PMO has established 22 scientific and technical focus areas critical to current defense needs for Pools 1 and 2. Each of these 22 focus areas is mapped to one of three corresponding primary domain areas: Defense Systems, Cyber-Security and Information Systems, and Homeland Defense and Security.

Each of the three current IAC domain areas are supported and represented by one primary Basic Center of Operations (BCO) single-award indefinite delivery/indefinite quantity (IDIQ) IAC contract.

The function of a BCO Contractor is to perform IAC "Core" services, focused on Information Collection, Processing/Management, Analysis and Dissemination, with typical activities including maintaining a knowledge repository/library, maintaining a presence in the technical community, and growing the knowledge repository collection (based on relevant research), maintaining a web presence, promoting customer awareness, preparing and publishing a newsletter, maintaining a Subject Matter Expert (SME) network database, and responding to technical inquiries, all focused on the assigned domain. Currently, there are three BCOs: Cyber-Security and Information Systems IAC (CSIAC), Defense Systems IAC (DSIAC) and Homeland Defense and Security IAC (HDIAC).

Under the current IAC construct, IAC Contractors perform IAC multiple award indefinite delivery/ indefinite quantity contracts in each of the three domain areas by competing for and performing task orders, previously referred to as technical area tasks (TATs) that complement and augment the IAC services provided by the BCO Contractors. These contracts are referred to as MAC TAT contracts.

Each task order is performed on behalf of, and funded by, a requiring activity (RA) customer authorized to use DTIC services. The terms "task order" (TO) and "technical area task" (TAT) are used interchangeably in the IAC program and in IAC materials referenced in this Performance Work

Statement (PWS). The requirement described herein is for task order services (aka TATs); this contract is a follow-on to the three IAC MAC TATs and is named "IAC MAC".
IAC MAC TOs encompass emerging Government R&D or other scientific and technical analysis requirements and necessitate a rapid and authoritative response, integrating the expertise of a diverse cadre of professionals positioned across various organizations, including representatives from Government, industry and academia. The level of research and analysis performed under IAC MAC TOs is above and beyond that offered by a BCO. The interdependence between "Core" services and IAC MAC TOs is defined in DoD guidance -- DoD Instruction 3200.14 establishes IACs to provide Core and additional R&D services. The BCO establishes a knowledge base in areas of strategic importance. The intent of IAC MAC TOs is to leverage the knowledge base to increase efficiency and effectiveness.
TOs result in creating new STI, which is added to the DTIC repository after quality control checks performed by the appropriate IAC BCO(s), based on the technical focus of the STI and the domain(s) with which it aligns. Additionally, TO efforts provide scientific and technical advice to Government, industry, academia, and other approved domestic users in the areas served by the IAC program. The STI and other products and services provided under TOs are intended to increase the productivity of the Research, Development, Test, and Evaluation (RDT&E) community, the Acquisition community, and other scientific and engineering groups working for the Department of Defense.
For each of the three afore-mentioned IAC technical domains, one five-year indefinite delivery/ indefinite quantity, multiple award contract (MAC) vehicle was awarded in 2014 or 2015 to perform all IAC TAT requirements expected to arise in that domain area. The three TAT vehicles are: Cyber-Security and Information Systems MAC TAT (CS TAT), Homeland Defense and Security MAC TAT (HD TAT) and Defense Systems MAC TAT (DS TAT). Each of the MAC TAT's Contractors compete for TATs placed under the vehicle through the FAR 16.5 task order fair opportunity process. The scopes of the three MAC TATs are now being consolidated under this IAC MAC. As a result of this consolidation, all tasks and deliverables described herein shall be applicable to the 22 technical focus areas listed in 1.4.2.1.2 below, for Pools 1 and 2. The IAC MAC IDIQ contract vehicle Contractors (taken as a whole) will perform task orders across all three IAC domains.
1.2 IAC MAC Objectives.
The objectives of the IAC MAC are to:
a. Draw from and build on the knowledge base of BCOs and in turn add to that knowledge base through the development and delivery of STI resulting from R&D and other R&D-related analytical services.
b. Foster a connection and engage collaboratively with IAC BCOs performing work in relevant domain areas so as to maximize utilization of BCO products and services and minimize unnecessary duplication of effort.
c. Conduct and/or support a wide range of studies, evaluations, and analysis of methods;
d. Promote standardization within the focus areas covered under this PWS in the DoD/Federal environment;
1.3 IAC MAC Mission.
The mission of the IAC MAC is to provide RDT&E and other R&D related analytical services for the vital technical areas delineated in the Technical Scope portion of this PWS. In performing IAC MAC research and analyses, the Contractor shall facilitate use of existing STI, while reducing unnecessary duplication of research, information collection and analysis, and information dissemination efforts. The Contractor shall minimize and/or reduce redundant generation of STI.
1.3.1 Breadth of Customer Support. May include DoD components and other U.S. Government agencies and departments and their contractors, state and local Governments, Industry, Academia and other institutions as well as international organizations in which the U.S. Government is a member or participant. Foreign Governments or foreign military organizations with which the United States or DoD has international agreements for military or related operations and or provides military assistance and sales.
1.4 Technical Scope.
The broad technical scope described herein includes all RDT&E services and other R&D-related analytical services. These services may support all aspects of identified or potential military, national

security-related, and dual use applications of related technologies and methods, as well as the development of tools and techniques that enhance the mission of the DoD Research and Engineering community. TOs can be multi-million dollar efforts, may involve multi-year performance, may involve work for other than DoD customers, may be performed at multiple worldwide locations (to include performance outside the United States), may require Top Secret facility clearance, and may require personnel clearances up to Top Secret (compartmented and collateral). TOs are not Government-staff augmentation support services. The level of research and analysis are above and beyond that provided by the BCOs.

Specific examples of the types of support and tasks the Contractor shall perform under TOs are listed below. This list is not all inclusive but representative of typical TOs tasks. Each TO will require one or more tasks. All efforts shall be related to one or more of the technical focus areas listed below in paragraph 1.4.2. All TOs must be for the primary purpose of analysis or development that will generate STI. Routine "operational" type services will be permitted to be included on a TO only as long as they are incidental to, and necessary for, completion of related scientific and technical analysis or developmental efforts that will generate STI.

1.4.1 Breath of Support and Representative Tasks

1.4.1.1 Breadth of Support. The technical scope and representative tasks described below in this PWS includes work necessary for basic and applied research, RDT&E services, other R&D-related analytical services, and development of doctrine, tactics or plans. RDT&E services are described in table 1-1 immediately below this paragraph and are used for the primary purpose of advancing scientific and technical knowledge or apply that knowledge to the extent necessary to achieve agency and national goals. Other R&D-related analytical services may constitute scientific, engineering, studies, research and other technical advisory services incidental to a significant component of an R&D effort that is analytical in nature and results in STI.

TABLE 1-1

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RDT&E SERVICES CATEGORIES

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Per DFARS 235.001 "Research and development" means those efforts described by the RDT&E seven budget activity definitions found in the DoD Financial Management Regulation (DoD 7000.14-R), Volume 2B, Chapter 5.

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BA 1, Basic Research
BA 2, Applied Research
BA 3, Advanced Technology Development (ATD)
BA 4, Advanced Component Development and Prototypes (ACD&P)
BA 5, System Development and Demonstration (SDD)
BA 6, RDT&E Management Support
BA 7, Operational System Development

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1.4.1.2 Technical Development. Develop, or improve/modify designs, standards, specifications, networks, materials, methods, solutions, models, databases, prototypes, organisms, components, applications, systems, tools, configurations, discoveries, assemblies, surveys, configurations, agents, formulas, practices, processes or other technologies, i.e., provide engineering and technical support on physical, biological, organizational, or information technology resources. This may include laboratory or field work.

1.4.1.3 Evaluation. Analyze, demonstrate, review, evaluate, validate, or test designs, standards, specifications, networks, materials, methods, solutions, models, databases, prototypes, organisms, components, applications, systems, tools, configurations, discoveries, assemblies, surveys, configurations, agents, formulas, practices, processes or other technologies, i.e., provide engineering and technical support on physical, biological, organizational, or information technology resources.

1.4.1.4 Plans and Frameworks. Develop and/or modify plans, architectures, frameworks, protocols, tactics,
policies, procedures, manuals, guides or strategies.

1.4.1.5 Implementation. Transition, integrate, upgrade, deploy, install or otherwise implement: designs, standards, specifications, networks, materials, methods, solutions, models, databases, prototypes, organisms, components, applications, systems, tools, configurations, discoveries, assemblies, surveys, configurations, agents, formulas, practices, processes or other technologies, i.e., provide engineering and technical support on physical, biological, organizational, or information technology resources.
1.4.1.6 Research and Analyses. Perform and document assessments, analyses, studies, reports, reviews, estimates, surveys or investigations.
1.4.1.7 Training (non-routine). Develop and/or deliver, conduct or facilitate education, trainings, instructions, tutorials, briefings, presentations, exercises, workshops or formal courses on developmental, non-commercial methods, models, applications, systems, tools, configurations, or other technologies; surveys, processes, phenomena, incidents, events, trends or patterns. This is not "routine" stand-alone training or education. All training services and education provided in this scope area must include an analysis component and generate new STI. The training and education must be incidental to and an adjunct of the analysis task.
1.4.1.8 Operations and Support Developmental Analysis. Provide analysis of operations and support activities. This includes analysis of systems (even those in the operational and support phase of their lifecycle) and processes, identification of potential improvements, and implementation of those improvements. This is not routine operational and maintenance (O&M) services. All services provided in this scope area must include an analysis component and generate STI. For example, analysis of maintenance practices on a mature system and making recommendations for improvements would be considered in-scope, conducting maintenance activities using current, accepted methods would be out of scope.
1.4.1.9 General Subject Matter Expertise. Provide subject matter expertise, consultation, recommendations, advice and other advisory support. The Contractor shall not provide purely staff augmentation services under this scope area without an analysis and STI component. These services must be for one or more of the types of services defined in the PWS, with associated STI deliverable(s).
1.4.1.10 Technical Conferences and Meetings. Organize, facilitate or participate in conferences, forums, symposia, events and meetings. All services provided in this scope area must include an analysis component. The conference/meeting support must be incidental to and an adjunct of the analysis task. The Contractor shall be engaged in developing content for the conference/meeting and not just provide administrative hosting support. Contractor performance of this task area is subject to the requiring activity obtaining all required approvals for Contractor participation in the conference, as stated in a TO PWS.
1.4.1.11 Other R&D or other R&D-related analytical services. Provide other R&D or other R&D-related analytical services, not elsewhere classified. Services included in this scope area must include an analysis component and shall not provide purely staff augmentation support without an analysis and STI component. These services must be for one or more of the types of services defined in the PWS, with associated STI deliverable(s).
1.4.2 Technical Focus Areas, Domains and Award Pools
1.4.2.1 Correlation of technical focus areas with BCO technical domains and IAC MAC award Pools:
1.4.2.1.1 BCO Technical Domains. Technical focus areas listed below are organized by the primary technical domain with which they are most closely associated. In the course of performing a TO, the TO Contractor shall interface with the BCO Contractor serving the domain covering the TO PWS, which will be specified in the PWS. However if a TO's scope has significant scientific or technical implications for, or overlaps with, the subject matter(s) associated with other IAC domains, the TO Contractor shall also engage with one or both of the other BCO Contractors, as appropriate. "Interface" in this context means STI Literature Searches/Gap Analyses, Annual STI Relevance Assessments, use of the BCO subject matter expert (SME) network and data repositories, etc. as described under PWS paragraphs 1.5.1.5 and table 1-2. As technology evolves in each of the focus areas below, example topics and applications will emerge that are not listed herein. The scope of this contract includes all emerging technologies related to or arising from the focus areas listed herein, even if not listed in this PWS. The elements and examples of each focus area listed herein are

illustrative, representative examples only and are not all-inclusive. The Contractor is not required to have expertise or experience in every example of every topic listed under the technical focus areas.
1.4.2.1.2 Award Pools. The table 1-2 below shows the correlation between technical focus areas and the BCOs.
TOs competed may have a partial or predominant scope including the technical focus area "CBRN - Non Laboratory". TOs competed will not include the Contractor's use of a non-Government furnished CBRN Laboratory or facility.
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TABLE 1-2
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TO's Technical Focus Area IAC Domain (& Corresponding Primary BCO)
Weapons Systems (Defense Systems)
Autonomous Systems (Defense Systems)
Survivability & Vulnerability (Defense Systems)
RMQSI (Defense Systems)
Advanced Materials (Defense Systems)
Military Sensing (Defense Systems)
Energetics (Defense Systems)
Directed Energy (Defense Systems)
Non-Lethal Weapons and Information Operations (Defense Systems)
C4ISR (Defense Systems)
Cyber-Security (Cyber-Security and Information Systems)
Software and Data Analysis (Cyber-Security and Information Systems)
Modeling & Simulation (Cyber-Security and Information Systems)
Knowledge Management and Information Sharing (Cyber-Security and Information Systems)
Homeland Security & Defense (Homeland Defense and Security)
Critical Infrastructure Protection (Homeland Defense and Security)
Weapons of Mass Destruction (Homeland Defense and Security)
Biometrics (Homeland Defense and Security)
Medical (Homeland Defense and Security)
Cultural Studies (Homeland Defense and Security)
Alternative Energy (Homeland Defense and Security)
CBRN Non-Laboratory (Homeland Defense and Security)
.
All Task Orders valued above $15M will be competed in Pool 1 only. No Task Order competed under Pool 1 will be set-aside for exclusive small business participation (nor for any small business socio-economic program sub-category such as service disabled veteran owned or woman-owned) even if there are two or more such small businesses likely to submit acceptable, reasonably priced offers for orders released in Pool 1.
1.4.2.2 Defense Systems Domain Technical Focus Areas
1.4.2.2.1 Survivability and Vulnerability refers to the science and technology for remaining mission-capable after a military engagement. The term "survivability" relates to the survivability of DoD platforms to avoid or survive a hostile threat (survivability of platforms and ability against specific threats). The scope of this contract is focused on the research and analysis of this subject matter area. This subcategory comprises four elements: Susceptibility - the likelihood of being detected, identified, and hit; Vulnerability - the effects of being hit by a weapon; Recoverability - damage control, restoration, mission continuation, and escape and evacuation; and Lethality - the effectiveness of munitions.
Examples of topics that fall within the general scope of Survivability and Vulnerability (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity within this technical focus area.
1) Survivable conventional force requirements; 2) air platform survivability/vulnerability; 3) ground system survivability/vulnerability; 4) ship survivability/vulnerability; 5) systems survivability; 6) low observable technology requirements for system survivability; 7) space related survivability; 8) laser

effects; 9) advanced materials for enhanced survivability; 10) high power microwave susceptibility and vulnerability; 11) battle damage repair; 12) advanced weapon survivability/vulnerability; 13) helicopter survivability/vulnerability; 14) missile system survivability/ lethality analysis; 15) aircraft survivability equipment; 16) munitions/ammunition vulnerability; 17) live fire testing analysis; 18) ballistic test facility; 19) modeling and simulation tools that are vital to survivability/vulnerability and lethality analysis; 20) integrated survivability; 21) crew casualty methodology improvement; 22) support of combat operations; 23) damage repair methodologies; and 24) logistics implications of survivability.
1.4.2.2.2 Reliability, Maintainability, Quality, Supportability, and Interoperability (RMQSI) is composed of how well each weapons system is designed and manufactured, and its maintainability over time. The scope of this contract is focused on the research and analysis of this subject matter area.
Examples of topics that fall within the general scope of RMQSI (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity within this technical focus area.
1) RMQSI-related interrelations between forms/functions/ shapes/ behaviors/structures/ dynamics, principles and constraints that govern the interactions between multiple functions; 2) the multi-functional component integration issues and system adaptation capabilities that allow systems to select and switch functions based on tasks and environments; and 3) reliability and life-lengthening methodologies for analyzing mechanical and electrical systems, especially those with extremely high failure rates; 4) system acquisition planning and management; 5) systems interoperability assessments; 6) integrated supply chain management; 7) RMQSI-related application of non-developmental and commercial technology in military applications; 8) reliability centered maintenance implementation; 9) logistics management and planning tools and other logistics applications, systems and operations-related analyses; 10) RMQSI-related root cause analysis; 11) RMQSI-related corrective action and re-engineering; 12) sustainment management planning; 13) reliable human factors; 14) integrated reliability & maintainability test planning; 15) affordability and life cycle cost analysis; 16) RMQSI-related environmental effects characterization; 17) quality improvement planning and implementation; 18) RMQSI-related design trade-off analysis; and 19) system/equipment lifetime extension analysis.
1.4.2.2.3 Military Sensing includes all sensing applications that apply to the defense of the United States of America. The scope of this contract is focused on the research and analysis of this subject matter area.
Examples of topics that fall within the general scope of Military Sensing (this list is not all-inclusive) is shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) X-ray, ultraviolet, visible/optical, infrared, radar, laser, acoustic, aroma, and other sensors; 2) electronic warfare and countermeasures systems; 3) the fusion, processing, distribution, and display of sensed information; 4) sensors, sensor subcomponents and materials technology; 5) counter-countermeasures; 6) directed energy/active sensor systems; 7) target, background and atmospheric phenomenology; and 8) manned and automated target acquisition/discrimination techniques. 9) The following are types of sensors the Contractor should have technical familiarity with: electromagnetic; electro-optical; infrared; radar; acoustic; seismic; magnetic; fused sensor combinations. Spectral bands of electro-magnetic sensors of interest include all wavelengths from the ultra-violet through radar (radio waves).
1.4.2.2.4 Advanced Materials is composed of traditional material and processes science, engineering and technologies in the context of defense systems and military applications. The scope of this contract is focused on the research and analysis of this subject matter area.
Examples of topics that fall within the general scope of Advanced Material (this list is not all-inclusive) is shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) Organic materials and organic-matrix composites including aerospace structural/thermal composites and hard coatings for wear and corrosion resistance; 2) effects of ion bombardment; 3) material and component technologies; 4) self-assembly of microstructures for advanced materials including tubules; 5) advanced ceramics, ceramic sol gels; 6) meta-materials; and 7) the assessment of potential applications including: controlled release, advanced composites for electronic, structural, and thermal applications, and environmental applications.

The scope also includes manufacturing and testing, including: 8) all processing and fabrication methods associated with the design, research and development and repair/remanufacturing of metals, composites, and energetic and munitions technologies; 9) new and existing machine intelligence relating to manufacturing; 10) non- destructive evaluation (NDE), testing and inspection; 11) corrosion mitigation; 11) mortar tubes; 12) weapons system life extension; 13) thermal controls and batteries; 14) processing techniques that can be developed for rapidly synthesizing materials and structures at low environmental and fiscal costs; 15) digital manufacturing and 3-D and other additive manufacturing; 16) 2-D materials; and 17) emerging technologies such as non-reflecting and self-cleaning surfaces, biocompatible silk, energetic material (for example, pyrotechnic compositions and explosives) and nanotechnology (for example, designing and developing nano-materials, nano-particles, and potential device application).

1.4.2.2.5 Energetics refers to the scientific study of energy under transformation in the context of defense systems and military applications. The scope of this contract is focused on the research and analysis of this subject matter area.

Examples of topics that fall within the general scope of Energetics (this list is not all-inclusive) is shown below -- the Contractor shall have technical familiarity to work within this technical focus area.

1) Explosives including homemade explosives; 2) propellants including chemical propulsion; 3) pyrotechnics and delays; 4) additives, reactive materials, and ingredients 5) detonation science and chemical engineering

6) all aspects of rocket propulsion ranging from small scale liquid engine components and tactical motors to launch booster class engines and strategic rocket motors as well as intermediate devices including combined cycle designs, spacecraft propulsion, hypersonic and space and missile propulsion system components; 7) research into propulsion concentrated on processes characteristic of reciprocating (diesel) and gas turbine engines and the combustion dynamics of propellants used for gun and missile propulsion; 8) emerging technologies relating to the research and evaluation of hybrid propulsion as a viable propulsion alternative to conventional propulsion; 9) hybrid fuels and oxidizers; 10) rocket nozzle technology and propellant grains; 11) disruptive energetics; 12) digital manufacturing of explosives and 13) 3-D additive manufacturing of explosives.

1.4.2.2.6 Non-Lethal Weapons and Information Operations consists of two sub areas: non-lethal weapons and information operations. Non-lethal weapons, defined in Department of Defense Directive 3000.03E, are weapons, devices and munitions that are explicitly designed and primarily employed to incapacitate targeted personnel or materiel immediately, while minimizing fatalities, permanent injury to personnel, and undesired damage to property in the target area or environment. Non-lethal weapons are intended to have reversible effects on personnel and materiel. Information Operations, as defined in Department of Defense Directive 3600.01, is the integrated employment, during military operations, of information-related capabilities in concert with other lines of operations to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting your own. The scope of this contract is focused on the research and analysis of these subject matter areas.

Examples of topics that fall within the general scope of Non-lethal Weapons and Information Operations (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.

1) Sound (sonic weaponry, acoustic weapons); 2) stench warfare (stink bombs); 3) military information support operations; 4) sock rounds; 5) pepper spray; 6) entangling devices; 7) Blunt trauma; and 8) the use of non-lethal weapons to combat asymmetric threats and operations on a real-time basis in the battlefield and at greater than small arms range.

1.4.2.2.7 Directed Energy includes weapons that emit energy in an aimed direction without the means of a projectile. The scope of this contract is focused on the research and analysis of this subject matter area.

Examples of topics that fall within the general scope of Directed Energy (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.

1) Electronic warfare with subcategories of electronic attachment, electronic protection and electronic warfare support; 2) electromagnetic power - bombs; 3) electro laser and other electroshock

weapons; 4) radio frequency technologies; 5) microwaves to disable communications; 6) pulsed energy projectiles; 7) electromagnetic radiation; 8) particle energy projectiles; 9) particle beam weapons; 10) electron particle beam weapons; 11) high-energy laser and related technologies; 12) countermeasures such as reflective coatings, gas envelopes and chaotic trajectories; and 13) all processing and fabrication methods associated with the design, research and development, production and repair of directed weapons.

1.4.2.2.8 Autonomous Systems is composed of ground, air, or sea-launched kinetic munitions that utilize on-board sensors, algorithms, and control methods to improve estimates on the target state, to understand the implications of the engagement situation/environment, or to develop engagement geometries that are otherwise unavailable to a conventional weapon. The scope of this contract is focused on the research and analysis of this subject matter area.

Examples of topics that fall within the general scope of Autonomous Systems (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.

1) Unmanned aerial systems (e.g. airplanes, helicopters, drones); 2) unmanned autonomous systems both for subsea and surface (unmanned underwater vehicles, unmanned surface vehicles, sea robotics, dual mode systems); 3) unmanned ground vehicles (robots, tanks, hummers); 4) multisystem collaborative autonomy; 5) autonomous-system related precision effects and control; 6) timely precision stand-off; 7) autonomous systems-related responsive and dynamic targeting; 8) autonomous systems-related difficult target defeat; 9) semi-autonomous weapons; 10) miniature autonomous systems; 11) full range of weapon capabilities of manned weapons as they relate to autonomous systems; 12) operations of autonomous agents such as anti-traction and anti-reaction chemicals; 13) counter-mobility agents; 14) autonomous-systems related pulsed energy projectiles; 15) autonomous systems-related plasma weapons; 16) autonomous systems-related advanced optical and communications technologies; 17) autonomous systems related stochastic pursuit-evasion differential games with multi-players; 18) autonomous systems-related hunter-prey relationships and swarming behavior; 19) challenging environments for autonomous systems (for example, littorals, urban, adverse weather, night, denial, deception, active defenses); 20) autonomous systems-related networked operations; 21) autonomous systems related-intelligent systems; 22) human agent teaming and 23) autonomous systems-related artificial intelligence and machine-language.

1.4.2.2.9 Weapons Systems refers to any integrated system, usually computerized, for the control and operation of weapons; this includes strategic and tactical, offensive and defensive weapons. This domain area covers any facet of technical research and analysis related to Weapons Systems that is not covered in a more specific bolded sub-category. The scope of this contract is focused on the research and analysis of this subject matter area.

Examples of topics that fall within the general scope of Weapon Systems (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.

1) Space and anti-satellite systems; 2) soldier systems; 3) future combat systems; 4) guidance systems; 5) tanks, aircraft, ship, submarine, and missile systems; 6) warheads; 7) small, medium and large caliber ammunition; 8) mortars; 9) hand-emplaced munitions such as mines, grenades and demolition systems; 10) firearms, cannon and artillery; 11) fuses, safe and arming devices; 12) countermeasures against laser-guided or laser-aided threats; 13) revolutionary lethal, and less lethal munitions-related research for new airframe/ordnance and guidance/control technology weapon paradigms; 14) the environmental impacts of weapon systems (for example, safe disposal and demilitarization of weapons, materials, and components); 15) weapons systems-related energy consumption, conservation and management; and 16) weapons systems-related environmental remediation and restoration.

1.4.2.2.10 Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) refers to systems, procedures, techniques, and equipment used to collect, analyze, disseminate and translate information into actionable intelligence, principally through cyber and electromagnetic activity. This includes intelligence collection and dissemination networks, command and control networks, and systems that provide the improved situational awareness on

the battlefield at all levels of command structure. C4ISR also includes cyber security products and services as well as communications standards that support the secure exchange of information by C4ISR systems (digital, voice, and video data to appropriate levels of command).
The scope of this contract is focused on the research and analysis of this subject matter area. Examples of topics that fall within the general scope of C4ISR (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) C4ISR technologies including hardware, such as radios, receivers, satellites, relays, routers, computers, networks and other information technology infrastructure; for Intelligence, Surveillance, and Reconnaissance ("ISR"): 2) remote sensors (infrared, MM-wave, optical, radio frequency sensors) placed on platforms such as aircraft and satellites and all manned and unmanned vehicles; for Command and Control, technologies that: 3) require advanced computing power and computer algorithms to fuse multiple sensor inputs and data streams into decision-making support software applications to provide real-time improvement of tactical situational awareness including C4ISR-related artificial intelligence applications. Also included are: 4) other software algorithms and programs applied to C4ISR including those that ensure interoperability among disparate communications systems, encryption algorithms to ensure secure communications, signal detection and image processing methods, anti-jamming and low probability of signal intercept techniques, communications networking protocols, and inertial navigation/Global Positioning System (GPS); and 5) threat warning systems and electronic countermeasures such as RF and communications-jamming techniques and decoys.
1.4.2.3 Cyber-Security and Information Systems Domain Technical Focus Areas
1.4.2.3.1 Software and Data Analysis is defined as the process of inspecting, cleaning, transforming, and modeling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making. The scope, as it relates to the DoD RDT&E communities' needs, includes the entire field of software technologies and engineering specifically as related to information, documentation, databases, model and architecture repositories, analysis, training, testing, data synthesis, hardware, software development, standards, economic consideration of selection of techniques and processes, and interoperability.
Examples of topics that fall within the general scope of Software and Data Analysis (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) Installation, demonstration, test, validation and evaluation of new and existing software, tools, methods and software measurement technologies; 2) evaluations of the quality of existing software systems and recommending improvements; 3) needs and risk analyses of software packages (developmental, non-developmental and commercial off the shelf (COTS) relative to mission requirements; 4) development, updating, and evaluation of software engineering standards, specifications, handbooks, or manuals; 5) supporting the revision and development of military standards and specifications; 6) verification and validation of solution sets and protocols; 7) assisting user organizations with all aspects of software development or software acquisition; 8) development of life cycle cost models; and 9) customization of software analytical tools, models, decision aids, artificial intelligence capabilities, screening methods and techniques used to evaluate and support the authenticity and continuity of DoD, national, commercial, and international information systems.
1.4.2.3.2 Cyber Security (CS) (formerly referred to as information assurance(IA)) is defined as the technologies, processes, and practices designed for prevention of damage to, protection of, and restoration of computers, electronic communications systems, electronic communication services, wire communication, and electronic communication, including information contained therein, to ensure its availability, integrity, authentication, confidentiality, and non-repudiation. While focused dominantly on information in digital form, the full range of CS also encompasses analog and physical form. The scope is not limited to information security; it includes the entire field of CS (availability, identification and authentication, confidentiality, integrity, and non-repudiation) and includes the economic considerations with respect to selection of CS techniques, CS processes, and industry trends. It also includes Information Operations (IO), e.g. operational security of information technology (IT), the use of the electromagnetic spectrum for IT purposes and computer network operations. In a contested cyber environment, CS supports Mission Assurance (MA) measures required to accomplish mission

essential objectives. CS support to MA entails prioritizing mission essential functions, mapping mission dependence on cyberspace, identifying cyber-related vulnerabilities, and mitigating risk of these vulnerabilities.
Examples of topics that fall within the general scope of Cyber Security (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
Full spectrum cyber operations including 1) developing CS planning frameworks and development of requirements and mission needs documents and conducting trade-off analyses; 2) cyber threat avoidance; 3) defensive cyber operations including red teaming and performing threat assessments of hardware and software systems; and 4) cyber offensive and exploitative operations. All of the above may include: cyber technology research, analysis and prototyping, cyber situational and mission awareness, cyber modeling, simulation and war gaming, integrating innovative cyber technologies to enable cyber superiority and the facilitation of technology transition.
1.4.2.3.3 Modeling and Simulation (M&S) is defined as the use of models, including emulators, prototypes, simulators, and stimulators, either statically or over time, to develop data as a basis for making managerial or technical decisions. The scope includes all classes of models and simulations, and may involve the interface of real-world systems (e.g., command and control systems, intelligence systems, weapon systems and components, sensors) with models or simulations, as well as working with model elements, standards and specifications, and modeling system descriptions, interfaces, and data communication methods.
Examples of topics that fall within the general scope of Modeling and Simulation (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) M&S subject matter expertise for supporting program reviews, strategic planning, exercise management, knowledge acquisition, and operations coordination and monitoring; 2) providing support for DoD certification of compliance with High Level Architecture for federates; 3) evaluating and improving models and databases that support IA; 4) the development and implementation of modeling and analysis tools for collaborative databases and data stores; 5) applying M&S for evaluating the effectiveness of forces, systems, doctrines, tactics and plans in support of training, analysis and acquisition activities; 6) evaluating M&S interoperability, reuse, capabilities and cost-effectiveness, particularly as fostered by the common technical framework; and 7) supporting cross-domain coordination, configuration management, and military exercises and demonstrations.
1.4.2.3.4 Knowledge Management and Information Sharing is defined as the analysis and technical support of practices used in an organization to identify, create, represent, distribute, conduct and enable the adoption and leveraging of good practices embedded in collaborative settings and, in particular, in organizational processes. Information Sharing (IS) is defined as data exchange, communication protocols and technological infrastructures. It includes standardization of information, as well as the human functions involved in the semantic, pragmatic and social levels of organizational semiotics. The two areas of KM and IS are intertwined as information sharing is the foundation for knowledge management.
Examples of topics that fall within the general scope of Knowledge Management and Information Sharing (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) Expertise in working with comprehensive collections of empirical data on the development, operation, and maintenance of software systems; 2) analysis of this data (data may be from new or existing sources) - this includes data analytics (data to decisions); 3) supporting the development, delivery and/or evaluation of training (including classroom, computer-based-instruction, video recording, distance learning, and other forms of instruction); 4) expertise in advanced collaborative analysis tools that allow for the integration of existing and in-process social networking and intelligence data exploitation tools; 5) processes and tools for big data decision-making and artificial intelligence applications; 6) assessment and implementation of semantically-enabled and other tools that support decision makers by leveraging existing information to create actionable knowledge; 7) intelligence and collaboration systems including Global Net Centric Systems; and 8) knowledge-management related computer system, computer network, and communication engineering, and knowledge management-related software integration, software engineering and software technology.

1.4.2.4 Homeland Security and Defense Domain Technical Focus Areas
1.4.2.4.1 Homeland Security & Defense is composed of Counterterrorism, Environmental Security, Aviation Security, Law Enforcement, Fraud Protection, Building and Facilities Security, Border Security, Disaster/Emergency Response and Recovery, and Cyber Security/Information Management. This is a domain area that covers any facet of homeland defense/security that is not covered in a more specific bolded sub-category below. The scope of this contract is focused on the research and analysis of this subject matter area.
Examples of topics that fall within the general scope of Homeland Defense and Security (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) IED/terrorist attack prediction; 2) technology and methods to detect explosives in public spaces and transportation networks; 3) spectrum management (i.e., the federal Government's use of the radio frequency spectrum); 4) emergency response information networks; 5) analysis of terrorist tactics and strategies; 6) operational threat response and recovery; 7) air and space domain surveillance and intelligence integration; 8) homeland defense-related sensor and imaging technology (i.e., non-military); 9) technology and methods for protection against counterfeiting and trafficking; 10) the detection/prevention of documentation- and computer-related fraud; 11) emerging technologies relating to physical security, exposing identity theft, controlling access across borders; 12) emerging technologies such as active shooter response technology; 13) technologies relating to building, sustaining, and improving capabilities to prepare for, protect against, respond to, recover from, and mitigate all hazards including natural disasters and terrorist attacks; and 14) technology-based security screener training, tools and processes/methods to optimize screening effectiveness.
1.4.2.4.2 Critical Infrastructure Protection (CIP) is the protection of infrastructure and resources critical to national security, and is composed of National Infrastructure, Physical and Virtual Systems, Cyber Infrastructure and Continuity of Operations (COOP). The scope of this contract is focused on the research and analysis of this subject matter area.
Examples of topics that fall within the general scope of Critical Infrastructure Protection (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) Emerging technologies and methodologies relating to public health systems/infrastructure; 2) financial services systems/infrastructure; 3) security infrastructure; 4) telecommunications infrastructure; 5) agricultural infrastructure; 6) technologies related to energy infrastructure and grid security and 7) COOP planning. Technology could also include: 8) CIP-related network development and analysis tools; 9) CIP-related failure modeling and simulations and analysis of data streams; 10) development of new affordable, transportable utility components, telecommunications, blast analysis and protection measures for CIP-attack response, and (11) CIP-related surveillance methods and technology.
1.4.2.4.3 Weapons of Mass Destruction (WMD) are defined as chemical, biological, radiological, or nuclear weapons or devices capable of a high order of destruction, high explosives, and/or causing mass casualties. The scope of this contract is focused on the research and analysis of this subject matter area.
Examples of topics that fall within the general scope of Weapons of Mass Destruction (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) International weapons technology and proliferation; 2) arms control; 3) technologies for WMD-related preparedness, countermeasures and investigations; 4) research and analysis related to WMD and IED-related international R&D technology, including implications of emerging threat information and queries from the intelligence community.
1.4.2.4.4 Biometrics is the automated methodology to uniquely identify humans using their physiological or behavioral attributes. The scope of this contract is focused on the research and analysis of this subject matter area.
Examples of topics that fall within the general scope of Biometrics (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.

1) Emerging technologies relating to fingerprints, footprints, palm print, hand geometry and DNA; 2) facial recognition including facial thermograph; 3) gait recognition; 4) eye retinal and iris recognition; 5) odor/scent recognition; 6) typing rhythm recognition; 7) voice pattern recognition; 8) signature recognition; 9) vein scan; 10) blood pulse recognition; 11) nail bed identification; and 12) ear shape recognition. Technology could also include: 13) devices and software for synthesis, analysis, measurement and characterization of biological markers, structures and features; 14) devices to acquire biometric data, biometric screening capabilities, biometric detection devices and methods; and (15) biomathematics and bioinformatics.

1.4.2.4.5 Medical is composed of any facet of medical research relating to homeland defense and security, public health/global health or military operations. The scope of this contract is focused on the research and analysis of this subject matter area.

Examples of topics that fall within the general scope of Medical (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.

1) Traumatic brain injury; 2) mental health; 3) amputation; 4) prosthetics; 5) limb salvage; 6) rehabilitation; 7) burn treatment including thermal, electrical, chemical and laser; 8) prevention and treatment of hearing loss, vision loss and spinal cord injuries; 9) clinical informatics - the organization of healthcare information; 10) aviation and combat life support equipment; 11) regenerative medicine (the use of expanded stem cells in an effort to facilitate recovery of marrow that has been exposed to radiation and chemical weapons); 12) infectious diseases; 13) pharmaceuticals; 14) non-invasive and remote assessment of physiological status; 15) pre-symptomatic diagnoses technology; 16) molecular genetics and genomics; 17) emerging technologies in diagnostic assays, disease vector control and protection systems; 18) combatting antimicrobial resistance systems; 19) medical preparedness; 20) health protection; 21) occupational, industrial and environmental health; 22) radiation health; and 23) field care medical needs

1.4.2.4.6 Cultural Studies is composed of cultural and sociological analysis - research into the ideology, political and economic nature of a culture in order to better understand its people and Government for national security purposes. The scope of this contract is focused on the research and analysis of this subject matter area.

Examples of topics that fall within the general scope of Cultural Studies (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.

1) Cultural anthropology (for example, collecting data about the impact of global, economic and political processes on local cultural realities); 2) cultural diplomacy (for example, initiation or facilitation of information exchange with an aim to yielding a long-term benefit and build relationships and enhancing socio-cultural understanding); 3) public diplomacy (for example, communication with foreign publics to establish a dialogue designed to inform and influence); 4) strategic communication (for example, communicating directly and clearly with regard to the operations, structures and processes of the DoD); 5) study of terrorism and responses to terrorism; 6) research on individual and group behavior, quantitative techniques to describe and understand social and economic systems, graph theory and network analysis to model social networks and complex system behaviors; 7) socio-cultural computing; 8) human adaptation and response to perturbations (e.g., climate change, mass migration, war); 9) interactions between human and natural systems; 10) technologies to enable/ enhance language learning; 11) theology/comparative religions; and 12) military information support operations (formerly referred to as "psychological warfare and operations").

1.4.2.4.7 Alternative Energy is composed of novel, non-traditional and emerging sources and technologies for harvesting, generating, storing, transmitting/transporting and reusing energy. The scope of this contract is focused on the research and analysis of this subject matter area.

Examples of topics that fall within the general scope of Alternative Energy (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.

1) Fusion energy; 2) renewable energy including solar, hydro and wind power, and integration with the electric grid; 3) geothermal energy; 4) fossil fuels; 5) hydrogen energy generation and storage; 6) alternative fuels including bio-energy/biofuels; 7) advanced energy storage, distribution and generation; 8) portable, efficient and compact power technologies; 9) energy recovery and conversion

including resource reuse and transformation; 10) micro-scale power sources; 11) novel electrical and magnetic materials for energy-applications; 12) alternative-energy related biomimetics applications; 13) alternative-energy related modeling and simulation and 14) nuclear batteries.
1.4.2.4.8 CBRN Non-Laboratory is composed of defense against (actual or potential) weaponized chemical, biological, radiological or nuclear agents. CBRN refers to deliberate use of these agents to cause significant harm. This scope area covers all CBRN requirements that do not require use of one or more of the CBRN laboratories or other facilities described in paragraph 1.4.3 below, in order to perform the TO. The scope of this contract is focused on the research and analysis of this subject matter area.
Examples of topics that fall within the general scope of CBRN Non-Laboratory (this list is not all-inclusive) are shown below -- the Contractor shall have technical familiarity to work within this technical focus area.
1) Properties and synthetic routes of CBRN materials for characterization and attribution; 2) technology and methods for detection, identification, measurement and characterization of CBRN agents including detection paradigms and systems for improved, emerging and novel threats; 3) experimental characterization of CBRN hazards; 4) combat effectiveness / force protection /logistics support of specialized CBRN defense equipment; 5) CBRN surveillance, security and survivability; 6) manufacturing processes for CBRN defense systems; 7) container security/intrusion detection devices for CBRN agents; 8) hazard modeling tools for CBRN events; 9) CBRN damage assessment; 10) individual and collective CBRN protection/protective gear; 11) technologies and methods for toxic material decontamination/cleanup, neutralization, and hazard mitigation; 12) securing and transporting CBRN agents; 13) development of non-lethal/less-hazardous CBRN materials; 14) environmental and human CBRN effects and treatment; 15) development, efficacy testing (non-clinical) and production of CBRN medical countermeasures including non-clinical safety toxicology and pharmacokinetic testing; 16) nonclinical toxicity evaluations of CBRN threats and emerging threats; 17) testing and operations assessments of CBRN analytical and diagnostic instrumentation; 18) CBRN operational threat response and recovery; 19) CBRN sensor and imaging technology (non-military); and 20) technologies for CBRN-threat related preparedness, countermeasures and investigations.
1.5 Program Management & Reporting
1.5.1 Management Requirements
1.5.1.1 General Program Management. The Contractor's organization shall be established with authority and capacity to effectively accomplish the management of this IAC MAC Indefinite Delivery/ Indefinite Quantity (IDIQ) contract and the oversight and performance of resultant TO requirements.
The costs associated with the program management and reporting required to manage the requirements of PWS Section 1.5 for IDIQ-level management will be proposed at the TO level. The Contractor is authorized to include an indirect or direct cost/price on individual TOs based on their acceptable accounting practices for performing contract-level program management and marketing (i.e., fulfilling the requirements of this Section 1.5) of the overall IDIQ contract.
1.5.1.2 The Contractor shall manage all aspects of work associated with providing services to the Government under this contract and any associated TO orders. At a minimum, the Contractor shall:
a. Respond to, execute, and manage a large volume of TOs effectively.
b. Manage employees and performance associated with any issued TO order.
c. Maintain a capable and stable workforce (recruit, retain, and replace qualified employee with appropriate security clearances), to include reach back capability as necessary.
d. Ensure that new/replacement personnel, including any key personnel if specified, meet or exceed the qualifications stated in the original TO proposal.
e. Develop and maintain a customer-oriented philosophy, create an environment that improves employee performance, solves programmatic issues and delivers high-quality performance.
f. Respond to Contracting Officer (CO), Government Program Manager (PM) or Deputy Program Manager (DPM), and Contracting Officer Representative (COR) requests in a timely manner.
g. Identify, mitigate, and manage organizational conflicts of interest and other performance risks.

h. Document and notify the Government of actual or potential Contractor program management problems and/or performance deficiencies. Perform corrective actions for all identified Contractor program management problems and/or deficiencies IAW time frames specified by the CO.
i. Develop and submit all required information and deliverables in accordance with individual TO requirements and timelines (to include the final technical report).
j. Plan, control, monitor, and report cost, schedule and performance metrics.
k. Actively market/promote the IAC MAC in accordance with the Contractor's acceptable Marketing Plan (submitted prior to contract award as part of the Contractor's proposal), and in accordance with the initial TO(s) issued under the contract for starting the implementation of the acceptable Marketing Plan. The Contractor's acceptable marketing plan will be incorporated into the first TO (aka "Program Management/Management Reporting" order) issued at time of contract award and will form the basis for the first TO. This TO will be issued on behalf of, and funded by, the DTIC IAC-PMO. The initial TO will satisfy the Indefinite Delivery/Indefinite Quantity minimum ordering guarantee for each contractor.
1.5.1.3 The Contractor shall continually monitor the cost and performance of applicable TOs awarded under this contract. The Contractor shall immediately notify the CO of any problems noted. The Contractor shall provide any additional cost and schedule information as requested by the CO to support TO performance. The Contractor shall provide this information in the Monthly Contract Cost and STI Assessment Tracking Report (CDRL A001).
1.5.1.4 The Contractor shall provide the technical approach and expertise, organizational resources, and management controls necessary to meet the cost, performance and schedule requirements specified herein and in any resultant TO during the period of performance of this contract and/ or applicable TO order. The Contractor's performance in meeting contract requirements will be evaluated by the Government using the performance data collected in accordance with PWS Section 2 and the ratings assigned to it for this contract in the Contract Performance Assessment Reporting System (CPARS).
Prime Contractors shall maintain throughout the duration of the contract period of performance, a certification for at least one of the following four certifications:
1) Capability Maturity Model Integration (CMMI) Level III (in either Development or Services) OR
2) A certification that is valid and current within the ISO 9001 Quality Certification standards OR
3) A certification that is valid and current within the ISO 27001 family of Information Technology Security standards OR
4) A certification that is valid and current for AS9100D.
1.5.1.5 The IAC Basic Center Operations centers serve as the DoD facility for collection, processing, management, analysis, and dissemination of DoD STI, including STI generated as a part of the IAC MAC TO effort. The IAC MAC Contractor shall allow free use and access among all IACs to all information generated under this contract or any associated TO subject to the limitations posed by the RA for which the TO work was performed. All IAC MAC generated or collected STI (e.g. Final Technical Report and other technical data thereto) shall be provided to the COR and/or TO Alternate Contracting Officer's Representative (ACOR) for inclusion in the DTIC STI repository. The DoD IAC PMO will coordinate with the RA for release of such data and/or information. This will be further defined per TO.
1.5.2 Reporting Requirements
1.5.2.1 General. The reporting requirements listed below will enable the IAC PMO to track and manage the overall IAC MAC vehicle and fulfill the mission of the IAC program. Some data items also serve the dual purpose of enabling RAs to oversee and manage their individual TOs. Additional data requirements, including both STI and non-STI, will be established in individual TOs. The contract-level reports listed below, unless otherwise stated, shall comprise a summation of data for all TOs awarded to the Contractor under the IAC MAC.
1.5.2.2 Contract-Level Deliverables
1.5.2.2.1 Monthly Contract Cost and STI Assessment Tracking Report (CDRL A001). This report is a roll-up of all the Contractor's TOs and shall provide cumulative totals for each TO and all STI: 1) required by each TO, 2) produced on each TO and 3) Uploaded to DTIC for all TOs awarded to it. The report shall include as a minimum: the items identified in the template embedded in the Contract

Data Requirements List (CDRL) provided in Section J. These reports shall be submitted via email to the CO and the DOD IAC COR.
1.5.2.2.2 Redacted IAC MAC and Redacted TOs (CDRL A002). To support transparency of Government contracting the Contractor shall provide a redacted copy of the awarded IAC MAC basic IDIQ contract appropriate for public release, which the Government intends to post to a public web site. Additionally, for each TO awarded, the Contractor shall provide a redacted copy of the order appropriate for public release, which the Government also intends to post to a public website.
1.5.2.2.3 Electronic Subcontract Reporting System (eSRS) (large businesses only) (CDRL A003). The Contractor shall submit electronic individual subcontract plan reports as required pursuant to FAR Clause 52.219-9, Alternate II, Jan 2017. In the form under "SUBCONTRACT AWARDS" section "13. Remarks" the Contractor shall input the actual cumulative of total funds obligated and the actual cumulative of total funds obligated to small business(es) on all task orders in whole dollars for the Fiscal Year and for the total cumulative basis of the contract with the corresponding small business subcontracting percentage as a percentage of the actual cumulative funds obligated for the Fiscal Year reported and for the total cumulative basis for the contract.
1.5.2.2.4 Reserved (CDRL A004).
1.5.2.2.5 Reserved (CDRL A005).
1.5.2.2.6 Task Order (TO) Success Stories (CDRL A006). The DoD IACs Success Stories are a compilation of information submitted by the IAC MACs Contractors' Task Orders (TO) Program Managers for posting on the DoD IACs public website. Each Success Story will detail the Contractor's most significant accomplishments (drawn from any of its active TOs) for the previous quarter. The DoD IACs PMO requires regular input from the IAC MACs Contractors to the Success Stories. Once submissions are reviewed and approved by the DoD IACs PMO, they will be forwarded to the DoD IAC's Public Affairs Officer for final approval and subsequently posted on the DoD IACs public website. Procedures for submission are in the Standard Operating Procedures (SOP) "Success Stories Section", embedded in the CDRL provided in Section J.
1.5.2.3 TO-Specific Deliverables
1.5.2.3.1 DTIC STI Repository & Non-STI Deliverables (CDRL A007). Contract data item CDRL A007 establishes the Government's contractual requirements and authority to direct the Contractor to deliver data items, both STI and non-STI to the Requesting Activity (and STI only to DTIC, via the IAC BCO), that will be specified in the PWS of individual TOs, but are not known at time of award of the IAC MAC and therefore are not listed within this contract PWS. The Contractor agrees to deliver any and all data items and other deliverables identified in individual TOs awarded to the Contractor, even if such data items are not listed in this section, nor listed in the CDRLs in Section J. Ordering offices are not authorized to require an RA to include additional forms DD1423 and DD1664 in individual TOs. All TO-specific data deliverable requirements that are not specifically listed in this contract PWS Section 1.5, whether STI or not, shall reference CDRL A007 as the data item authority. CDRL A007 is the only CDRL that authorizes the Government to require TO-specific data items that are not listed in this Section 1.5 and is the only CDRL that will be referenced in TOs for such data items. All data deliverable format and content requirements for TO-specific STI that are not listed in this Section 1.5 will be described in the TO PWS. DD1664 Data Item Descriptions for such data deliverables shall not be used on any TO unless specifically first requested by the RA and agreed to by the TO Ordering Officer and the cognizant IAC MAC Contracting Officer.
1.5.2.3.2 TO Post-Award Orientation Slides (CDRL A008). Contractor's format is acceptable. Submit electronically in accordance with TO PWS. Covers requirements, roles/responsibilities, and cost/ schedule/performance. Due no later than 7 days after post-award orientation meeting.
1.5.2.3.3 Program Management Plan (CDRL A009): TO specific deliverable prepared IAW TO PWS requirements. Submitted electronically. Blocks 10/11/12/13: Submit initial Plan 15 days after TO award. When new taskings are received, update Plan within 15 days of tasking.
1.5.2.3.4 Monthly Status Report (MSR) (CDRL A010). The Monthly Status Report will report on TO cost, schedule, and performance against PWS requirements, providing information at the TO level. The individual TO PWS may state specific MSR format, content and delivery requirements. Specific MSR format, and additional content not specified in this section, shall be mutually agreed upon by the

contractor and ACOR; this should be established no later than the Post-Award Orientation. Template for submission is embedded in the CDRL provided in Section J.

1.5.2.3.5 TO-Specific Annual STI Gap Analysis (CDRL A011). The Contractor shall maintain close coordination with BCO personnel/resources, to ensure TO performance builds on the breadth of the BCOs' knowledge bases. TO performance provides an opportunity to validate BCO research and STI in a specific, operational context. Further, TO operational requirements provide real-time assessment of areas where STI is most needed.

At the TO Post Award Orientation, the Contractor will receive from the COR of the affiliated BCO a pre-award STI Literature Search completed prior to TO award. The BCO performing the search will be the BCO most closely affiliated with the scope of the TO as determined by the COR. This report will document technical documents (and other STI resources) relevant to the work being performed under the TO. It will identify, by PWS task, the STI (gathered from DTIC databases, and other sources) that is already available to shed light on the challenge(s) presented in each PWS task.

The TO Contractor will build on the knowledge provided by the Literature Search in performing the TO work. In the TO Specific Annual Gap Analysis, the TO Contractor shall, for each search term provided on the pre-award Literature Search, identify gaps in the knowledge base that surfaced in the course of performing the TO work, e.g., the task required information on XYZ, but the literature search did not turn up STI on XYZ. These "STI Gaps" will identify to the BCO(s) where they need to focus their knowledge collection efforts in the future. The BCOs are uniquely positioned to identify trends in knowledge gaps as they will receive gap analyses across multiple TOs. Template for submission is embedded in the CDRL provided in Section J.

1.5.2.3.6 Final Technical Report (FTR) (CDRL A012). For each TO, the Contractor shall provide two detailed technical reports to include task background, objectives, assumptions, specific data collected, analyses conducted, conclusions and recommendations. Each report shall be delivered to the Requiring Activity (RA) ACOR and COR. Under authority of the RA, (when an unclassified document or a classified document) with approval by the COR, each TR shall have a Distribution Statement in accordance with DoD Directive 5230.24, 'Distribution Statements on Technical Documents. Every effort will be made to avoid utilizing Distribution F (Further Distribution Only As Directed By The Requiring Activity Identified In The PWS For Each Individual Task Order). However, if sensitive internal information is contained in the TR, a sanitized version of the TR shall be created for distribution within DoD (Distribution D) and inclusion in the DTIC Database (STI repository). If the TR is CLASSIFIED, the COR and RA will review the document for appropriate security markings IAW DoD Security Guidelines and will also have an appropriate distribution statement assigned. The Contractor shall submit an UNCLASSIFIED abstract (Report Documentation Forms, Standard Form 298) of every TR (i.e., all TO report deliverables) for all TRs containing classified information.

The COR will be responsible for coordinating and submitting documents to the IAC BCO centers for inclusion in the DTIC Database. The first report will be due after 30 months for an order with a period of performance of sixty months with or without options. Only one final report is required for any period of performance that is less than 30 months. The final report is due no later than 45 days prior to the last date of the order's period of performance.

1.5.2.3.7 Contract Manpower Reporting (CMR) (CDRL A013). The Contractor shall report ALL Contractor labor hours (including subcontractor, independent consultant and wholly owned subsidiary labor hours) required for the performance of services provided under this contract via a secure data collection site. The Contractor is required to completely fill in all required data fields at http://www.ecmra.mil. Reporting will be at the order level and must be reported according to the Requiring Activity of the order.

Reporting inputs will be for the labor executed during the period of performance for each Government Fiscal Year (FY), which runs 1 October through 30 September, while the order remains active. While inputs may be reported any time during the FY, all data shall be reported no later than 31 October* of each calendar year. Contractors may direct questions to the Contract Manpower Reporting Application help desk.

*Reporting Period: Contractors are required to input data by 31 October of each year.

Uses and Safeguarding of Information: Information from the secure web site is considered to be proprietary in nature when the contract number and Contractor identity are associated with the

direct labor hours and direct labor dollars. At no time will any data be released to the public with the Contractor name and contract number associated with the data.
User Manuals: Data for Air Force service requirements must be input at the Air Force CMRA link. However, user manuals for Government personnel and Contractors are available at the Army CMRA link at http://www.ecmra.mil
1.6 General Information & Administration
1.6.1 Publications and References. Applicable publications, directives, handbooks, and standards provide guidance and direction in performance of the requirements. Applicable publications, directives, and/or standards, in addition to those listed in Section J, Attachment 2, will be specified within each TO and the Contractor shall comply with the most current version of any applicable document. Unless otherwise specified the issue of these documents are those listed in the effective Department of Defense Index of Specifications and Standards, maintained on-line at http://www.dtic.mil/whs/directives/. In the event of a conflict between this PWS and any document referred to herein or in any TO issued under this contract, the requirements of this PWS shall prevail unless the document is mandated by law. The Contractor shall be responsible for notifying the CO in writing within 30 days of publication revisions/changes/supplements if there is any impact on the scope of work to be performed under this contract or order hereto.
1.6.1.1 Directive/Guidance Documents. The terms "directive" and "guidance" shall be defined as follows:
1.6.1.1.1 Directive Publication. Compliance with directive publications by the Contractor is mandatory. If a directive publication requires compliance with one or more publications or parts of other publications, the referenced publication(s) shall be applicable to the Contractor as it applies to the original directive.
1.6.1.1.2 Guidance Publication. Provides information and guidance for the Contractor to perform a particular job or carry out an operation in a manner compatible with the applicable procedure.
1.6.2 Documentation and Data Rights.
1.6.2.1 Documentation developed or acquired may include existing data only if such data has been provided to the Government with unlimited data rights as defined by DFARS clause 252.227-7013, Rights in Technical Data--Noncommercial Items or DFARS clause 252.227-7014, Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation, as incorporated in Section I. The Contractor may choose to document its own, subcontractors, and vendors existing commercial off-the-shelf (COTS) hardware; however, the Contractor must comply with the requirements in DFARS 252.227-7013 and DFARS 252.227-7014, and notify the Contracting Officer prior to committing to the use of privately developed items, components, processes or computer software to be delivered with other than unlimited rights. If at any time documentation with other than unlimited rights is proposed for delivery under this contract, the Contracting Officer reserves the right to negotiate the minimum technical data rights required under this contract.
1.6.2.2 The Contractor shall be required to allow free use and access among all IACs to all information generated under this contract subject to the limitations imposed by the RA for which the TO work was performed. The Government will coordinate with the RA for release of such data and/or information. STI generated and/or developed exclusively with Government funds will be made available for distribution by the Government under the Rights in Technical Data Clause, DFARS 252.227-7013. The Government holds unlimited rights to the distribution of the material as stated in DFARS 252.227-7013.
1.6.2.3 The Government may require additional CDRL(s) on a given TO. These CDRLs may include a Data Accession List (DAL) that may in turn include rights in Commercial Technical Data (TD), Commercial Computer Software (CD), and Commercial Computer Software Documentation (CSD). A secure Integrated Data Environment (IDE) for hosting all technical data and computer software used or produced in the performance of a TO shall be used when developing Open System Architecture (OSA) and corresponding components. The following may be specified at the TO level.
1.6.2.3.1 Deliver all software and hardware developed, modified, enhance, assembled, or acquired to the Government.
1.6.2.3.2 Deliver all software developed to the Government in the form of source and object code.

1.6.2.3.3 Deliver all software in a maintainable and modifiable format with no reliance on any non-delivered computer program or documentation.
1.6.2.3.4 Make arrangements for licensing and maintenance agreements for all software and hardware purchased or licensed to be transferred to the Government.
1.6.2.3.5 Design and develop all computer software using an approved language. The language selected shall consider system interface, interoperability, communications functions, human interface, and requirements for security, safety, and reliability. Design the software to make use of existing software and for subsequent reuse to the maximum feasible extent.
1.7 Security Requirements
1.7.1 General. Access to classified information will be limited to the subject fields of interest evidenced by the scope of the TO PWS. The Contractor shall handle any classified information required to perform its tasks in conformity with established DoD security regulations, including DoD 5220.22-R, the DoD Industrial Security Regulation, and DoD 5220.22-M, National Industrial Security Program Operating Manual.
1.7.2. Personnel & Facility Clearance Security Qualifications. Security qualifications include the following:
a. All Contractor personnel shall comply with the provisions of DoD 5220.22M, National Industrial Security Program Operating Manual, current edition, (hereafter known as the NISPOM) and DoD Instruction 5200.01, "DoD Information Security Program and Protection of Sensitive Compartmented Information," Apr 16 (or current version if updated or superseded).
b. The Prime Contractor shall possess a minimum Interim Top Secret Facility Clearance. Each partner of a Joint Venture Prime Contractor must possess a minimum Interim Top Secret Facility Clearance at proposal. A Joint Venture Prime Contractor or a Prime Contractor awardee with a minimum Interim Top Secret Facility Clearance will have 150 days from award to acquire a minimum Top Secret Facility Clearance. Specific security clearance requirements applicable to individual TOs will be specified on a TO-specific DoD Contract Security Classification Specification (DD Form 254) included in each TO, completed and approved by the RA's cognizant Security Officer and in accordance with the RA's security policies and procedures. Unclassified TOs do not require a facility clearance issued by the Defense Security Service (DSS) nor a TO-specific DD Form 254. Individual TOs may require Contractor employees to have routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system. Security clearances for Contractor employees, including Subcontractor employees, performing on individual TOs may require Confidential, Secret, Top Secret, Agency-Specific Clearances, and/or Special Background Investigations for Sensitive Compartmented Information or Special Access Programs. The Contractor shall fully cooperate on all security checks and investigations by furnishing requested information to verify the Contractor employee's trustworthiness and suitability for the position. The Contractor shall be required to safeguard information at the level specified in the DD Form 254 in this contract and/or the TO. Collection and use of unclassified, unclassified but limited distribution, and classified (foreign and domestic) information in the performance of this PWS is authorized as long as all security regulations and restrictions are adhered to.
c. The Contractor shall be required to provide employees who already possess the appropriate security clearance level for all TOs. The planned utilization of non-U.S. Citizens in TO performance must be identified by name and country of citizenship in the TO proposal. Foreign Nationals shall not be allowed access to Classified or Critical Program Information unless approved on a case-by-case basis by DSS.
d. Any costs incurred for clearances shall be done at the Contractor's expense and shall not be allowed as direct cost against this contract. The Contractor is responsible for providing and maintaining personnel with the appropriate security clearances to ensure compliance with Government security regulations, as specified in the individual TO.
e. DSS has security inspection responsibility for Top Secret information and retains responsibility for all classified information released or developed under the contract and held within the DoD Contractor's facility. The Government has full and complete control over granting, denying, withholding or terminating security clearances for employees. The granting of a clearance shall not prevent, preclude, or bar the withdrawal or termination of any such clearance by the Government.

1.7.3. Protection of Government Systems/Information. The Contractor shall be responsible for safeguarding all Government information or property provided for Contractor use. At the close of each work period, Government information, facilities, equipment and materials shall be secured as specified.

1.8 Publishing Requirements

1.8.1. Marking of Products.

a. The Contractor shall comply with DFARS 252.235-7010, "Acknowledgment of Support and Disclaimer". All information products prepared and published by the IAC MAC Contractor shall contain a Distribution Statement in accordance with DoD Directive 5230.24, 'Distribution Statements on Technical Documents,' on the cover page of a report or document, on the media case containing information in electronic format, and on the opening screens of any computer or visual display. All information products shall also include proper unclassified and classified markings in accordance with DoD Directives.

b. All items published and/or furnished by the IAC MAC Contractor shall reflect that the products were prepared in part, or wholly, as the case may be, under the auspices of the DoD IAC program and will include the IAC MAC number and distribution statement. Items shall also include the statement that the work effort was sponsored by the Department of Defense Information Analysis Centers.

c. The Contractor further agrees to include this requirement in any subcontract awarded as a result of this contract.

1.9 Place of Performance. The place of performance will be specified in each TO. The Contractor shall provide all facilities, including office space, which includes classified and unclassified storage, utilities, materials, equipment (including all computer hardware) and any other property necessary and sufficient for any TO not taking place onsite at a Government location, unless otherwise specified in the TO.

1.10 Pricing TOs. A Government-developed Cost/Price Table will be provided to the prime contract holders and shall be used for each TO, unless otherwise specified in the TO.

1.11 Designation of COR(s)/ACOR(s)

a. The Contracting Officer's Representative (COR) or CORs for this contract shall be appointed in writing by the
Contracting Officer. An Alternate COR (ACOR) from the requiring activity will also be appointed for each individual TO.

b. The COR(s) and, for each TO, the appointed ACOR are responsible for Government oversight and surveillance of Contractor performance and shall be contacted regarding questions or problems of a technical nature. In no event shall any understanding or agreement, modification, change order, or other matter deviating from the terms of
subject contract between the Contractor and any person other than the Contracting Officer be effective or
binding upon the Government.

c. On all matters that pertain to contract terms, the Contractor will contact the Contracting Officer. When, in
the opinion of the Contractor, the COR/ACOR or Requiring Activity requests effort outside the existing scope of the order or contract, the Contractor will promptly notify the Contracting Officer in writing. No action will be taken by the Contractor under such request unless and until the Contracting Officer has issued a contractual modification.

1.12 COMSEC Notice. All communications with DoD organizations are subject to communications security (COMSEC) review. Contractor personnel shall be aware that telecommunication networks are continually subject to intercept by unfriendly intelligence organizations. The DoD has authorized the military departments to conduct COMSEC monitoring and recording of telephone calls originating from, or terminating at, DoD organizations.

1.13 Contractor Identification Requirements & Performance of Work on Government Premises. Contractor personnel performing services on Department of Defense installations or other Government facilities shall ensure that they are readily identifiable as Contractor employees. The Contractor shall be required to contact the TO ACOR to obtain the necessary base entry procedures.

a. Contractor employees shall:

1) Identify themselves as Contractor personnel at the onset of every telephone call made from a Government telephone or any other phone if the call is made in support of any service provision to the Government;
2) Identify themselves as Contractor personnel in all recorded messages including those which are heard by callers attempting to contact Contractor employees via answering machines or voice mail;
3) Identify themselves as Contractor personnel at the onset of every meeting, conference or any other gathering attended in support of any service provision to the Government;
4) Identify themselves as Contractor personnel on any correspondence, documents or reports accomplished or sent in support of any service provision to the Government, including but not limited to, correspondence sent via the U.S. Mail, facsimile or electronic mail (email) inclusive of "out-of-office" replies;
5) Wear or display Contractor provided nametags, badges or attire which display, at a minimum, the name of the Contractor.
6.) All contractor employees shall have a non-disclosure agreement on file signed by the individual and by a responsible official of their employing company.
b. Any work under this contract which is performed by the Contractor or any of its subcontractors on premises under Government control is subject to all requirements of this contract governing such work, and the following:
1) All Contractor and subcontractor personnel shall, at all times, conspicuously display a distinctive badge provided by the Contractor, identifying such personnel as employees of the Contractor and shall observe and otherwise be subject to such security regulations as are in effect for the particular premises involved.
2) All Contractor and subcontractor personnel shall be easily recognized by wearing Government provided security badges while working in a U.S. Government facility.
3) The Contractor shall provide direct supervision of its own employees but shall not supervise Government personnel or accept a supervision role from any Government personnel.
4) The Contractor shall designate in writing, an on-the-premises representative to serve as point of contact for the Contractor to the Contracting Officer or their duly authorized representative.
5) All Contractor and subcontractor employees shall dress appropriately for a professional work environment.
1.14 Permits and Responsibility for Work. The Contractor shall, without additional expenses to the Government, obtain all licenses, certifications, and permits required for the performance of work.
SECTION 2 -- SERVICES SUMMARY
The Government will evaluate performance of the services listed in the services summary (SS) table 2-1 below to determine if it meets the performance thresholds. CORs will follow the methods of surveillance specified in the Government's Quality Assurance Surveillance Plans (QASPs) record surveillance observations, and when the proper level of performance is not met, the CO will issue a Corrective Action Request (CAR). When the Government makes an observation that indicates defective performance, the COR will require the Contractor representative to initial the observation(s). The contractor initialing the observation does not necessarily constitute concurrence with the observation, only acknowledgment that they have been made aware of the defective performance.
A QASP will be developed for each individual task order. Each task order will establish performance objectives and measures in the order-level PWS. Performance evaluations made pursuant to this section will contribute to the Government's CPARS evaluations.
SERVICE SUMMARY TABLE 2-1
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PERFORMANCE OBJECTIVE: Customer Satisfaction
PWS: All Sections
PERFORMANCE MEASURE:
Contractor receives less than 2 formal customer complaints / corrective action requests during the ordering period in effect (received at either the TO or IDIQ contract level). Contractor successfully resolves complaints within 14 days of receipt 100% of the time.
PERFORMANCE OBJECTIVE: IDIQ Contract-Level Management Requirements
PWS: 1.5

PERFORMANCE MEASURE: Effectively accomplishes the IAC MAC IDIQ contract level management and minimum requirements stated in PWS paragraph 1.5.1.2.
PERFORMANCE OBJECTIVE: Reporting Requirements
PWS: 1.5.2
PERFORMANCE MEASURE: All reports submitted are 95% complete on the date specified for delivery.
PERFORMANCE OBJECTIVE: Security Requirements
PWS: 1.7
PERFORMANCE MEASURE: All security requirements are met 100% of the time.
PERFORMANCE OBJECTIVE: Small Business Subcontracting Requirements
PWS: 4.5
PERFORMANCE MEASURE: Contractor meets or exceeds the goals established in its approved Small Business Subcontracting Plan (applicable to non-Small Business prime Contractors only)
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SECTION 3 -- GOVERNMENT PROPERTY
3.1 General Information. The Contractor shall ensure accurate control and accountability of all assigned Government Property (GP) in accordance with FAR Part 45 and Defense Federal Acquisition Regulation Supplement (DFARS) Part 245 and as stated in individual TOs. IAW FAR 45.101, Government Property means:
"All property owned or leased by the Government. Government property includes both Government-furnished property and Contractor-acquired property. Government property includes material, data, equipment, special tooling, special test equipment, and real property. Government property does not include intellectual property and software."
Government property that is Government-furnished (i.e., Government furnished equipment, Government furnished materials, Government furnished information and Government furnished facilities) will be specified, to the extent known at time of TO award, in the individual TO. All Government data will be restricted from use by the contractor for other than its intended purpose and shall not be used by the contractor's personnel for any purpose other than lawful contract execution. All contractor employees shall have a non-disclosure agreement on file signed by the individual and by a responsible official of their employing company.
SECTION 4 -- OTHER TERMS AND CONDITIONS
4.1 Organizational and Consultant Conflicts of Interest (OCI)
4.1.1 There is a potential for organizational conflicts of interest (OCIs) under this contract. An OCI will be present when an IAC MAC prime Contractor or subcontractor also holds one or more IAC Basic Center Operations (BCO) contracts. The Government is avoiding this risk entirely by not allowing a BCO prime Contractor to also be a prime/subcontractor on this IAC MAC IDIQ contract. Another conflict may be present when an IAC MAC prime Contractor or subcontractor is also a subcontractor to a BCO contract. As OCIs are identified in the course of awarding (1) this IAC MAC, (2) task orders under this contract, or (3) BCO contracts, the Contracting Officer shall take action to avoid, mitigate, or neutralize such OCI as required under FAR Subpart 9.5. The Contracting Officer's actions may include, without limitation, restraints on the future activities of the Contractor. The precise details and characteristics of such restraints or other necessary actions shall be determined as specific OCI are identified. The actions to be taken by the Contracting Officer under FAR Subpart 9.5 and DFARS 209.5 shall be open to discussion. Nevertheless, after engaging in good faith discussions, the Contracting Officer shall exercise his or her responsibilities under FAR Subpart 9.5 and DFARS 209.5 at his or her sole discretion, regardless of whether agreement is reached with the Contractor.
4.1.2 OCIs may also arise under circumstances outside of the operations of the DoD IAC contracts. Such OCIs may be identified by the Government or the Contractor. The Contractor agrees that if, at any time, the Contractor identifies a potential or actual OCI, the Contractor shall make full disclosure in writing to the Contracting Officer. This disclosure shall include a description of the OCI and the action(s) the Contractor has taken, if any, to avoid, mitigate, or neutralize the OCI. The Contracting Officer may require the Contractor to prepare an OCI risk mitigation plan to avoid, mitigate, or neutralize the potential or actual OCI. Whenever an OCI is identified, the Contracting Officer shall take action in the same manner described in the paragraph immediately above.

4.1.3 The Contractor further agrees to insert a provision with substantially the same OCI language stated above in all subcontracts awarded in relation to IAC MAC efforts. Any restraints required by the Government shall be imposed in accordance with the provisions of FAR Subpart 9.5, with particular attention to FAR 9.507-2.

4.2 Period of Performance for Contract and TOs.

The maximum potential ordering period of the basic IDIQ contract, if all options are exercised, is nine years from the effective date of the contract award, and may be extended for a period of up to six additional months pursuant to the Option to Extend Service clause (FAR 52.217-8). TOs may be issued during the ordering period of this contract and shall be completed within the timeframe stated in the order. A task order period of performance, including any option periods that may be exercised after the end of the IDIQ contractor ordering period, may not extend more than 60 months past the end date of the overall IDIQ contract ordering period. The Government has no obligation to issue any orders beyond the minimum order guarantee to each awardee. A TO may include a period of performance (with or without options) up to but not exceeding a total of 60 months in duration.

4.3 Travel and Other Direct Costs (ODCs)

4.3.1 Travel. Cost Reimbursable travel shall not include a profit or fee bearing cost element: Contractor employees may have occasion under this contract to travel from their regular duty locations to a temporary duty location. Transportation, per diem, and lodging expenses required in the performance of temporary duty shall be reimbursed on a cost reimbursable basis to the Contractor in accordance with FAR 31.205-46 and the DoD Joint Travel Regulations (JTR), excluding profit/fee. Reimbursement for travel shall be limited to those expenses specifically authorized by the above-referenced regulations. Cost estimates shall be based on number of trips, personnel, and location per individual TO. Unless the Government specifies otherwise, the Contractor should use this cost estimate in its overall price proposal. The Per Diem rates are posted on: http:// www.defensetravel.dod.mil/site/perdiem.cfm.

All travel must be approved by the ACOR prior to purchase or as otherwise directed at the Task Order level.

4.3.2 Other Direct Costs - Materials, Equipment, and Supplies. Cost Reimbursable material can include a profit or fee bearing cost element. Equipment meeting the definition in FAR 45.101 and charged directly to the contract shall not include a profit or fee cost element, as specified in FAR 15.404-4(c)(3). All materials, equipment, and supplies shall be approved in accordance with FAR 52.244-2 and the Contractor must provide to the appropriate approving official adequate detail of proposed purchases for requirements.

4.4 Minimum Task Order Proposal Submittals. Awardees must participate actively in the IAC MAC vehicle by submitting at least one TO proposal per year in response to the Fair Opportunity Proposal Requests (FOPRs) released in the Contractor's Pool(s). If the Contractor holds a contract in more than one Pool, the minimum of one will be for all its Pools combined. Exceptions to this requirement may be made by the Contracting Officer if the Contractor is able to provide a justifiable rationale for why it was not possible to meet this requirement. A "year" will be measured from the contract award date through one year thereafter, and each year subsequent to that period.

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4.5 Small Business Participation Goals. Large businesses in Pool 1 are expected to meet or exceed the small business subcontracting goal of 13% established in the Contractor's Small Business Subcontracting Plan as a percentage of dollars obligated across all Task Orders. For complying with the Small Business Participation Goals the North American Industry Classification Code (NAIC) is 541715, with a size standard of 1000 employees. In evaluating small business subcontracting achievements, the Government will measure subcontracting performance annually (based on the Government's Fiscal Year) on a total cumulative basis. The Government will obtain data from CDRL A001 Monthly Contract Cost Tracking Report and or the contractor's eSRS report. The data will be assessed by the Government and the results will be reflected in an annual assessment using the Contractor Performance Assessment Reporting System (CPARS).

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4.6 On Ramps

4.6.1 The Government reserves the unilateral right to reopen competition or "On-Ramp" additional Contractors in any competition Pool at any time during the term of the contract. The Government may choose to On-Ramp any number of new awardees when the Contracting Officer determines it is in the Government's best interest to do so in order to enhance the competitive environment of TO solicitations under the originally awarded IDIQ contracts.
This may be due to any reason, including the lack of robust competition for TOs or a shrinking of the competitive Pool of original effective IDIQ awardees under this solicitation.
4.6.2 When an On-Ramp is used, the Government will advertise the reopening of the competition on www.FedBizOpps.gov, and awardees shall meet the criteria established in the initial IAC MAC solicitation for the respective Pool; this includes all evaluation criteria for that Pool. The evaluation and selection of awardees for any On-Ramp will be based upon substantially the same evaluation and award criteria used for the IAC MAC initial basic contract awards for the respective Pool. The anticipated number of awards for any Pools of competition will be announced in the reopening announcement posted to FedBizOpps. Any new awardees will compete with any existing or remaining Contractors for all task orders in the appropriate competition Pool.
4.6.3 The reopened solicitation may contain additional or updated clauses that were revised since the initial solicitation. In the event an "On-Ramp" is used, Contractors with existing contracts within the applicable competition Pool will be notified of any clause additions or updates which will be incorporated via a bilateral modification.
4.6.4 Any additions due to On-Ramps will be co-terminus with the existing term and not impact the contract maximum ordering ceiling and the ordering period for new awardees and will not exceed the overall maximum term of the original ID/IQ contract, including options (i.e., will not extend past the dates established at initial award).
4.6.5 The Government will not consider unsolicited requests for addition to any competition Pools.
4.7 Off Ramps
4.7.1 The Government reserves the unilateral right to Off-Ramp non-performing Contractors. Contractors that are Off-Ramped will not be eligible to compete for new TOs in the Pool in which they are Off-Ramped, but will be required to continue performing active task orders until the period of performance of such orders ends. The Off-Ramp process under an IDIQ contract encompasses several methods by which the Government may exercise its right to remove a Contractor from a Pool of contract awardees. Examples of non-performance, includes, but is not limited to: 1) A Contractor does not meet minimum requirements for participating in task order competitions as described in PWS paragraph 4.4, 2) A Contractor does not meet the small business subcontract goals established in PWS paragraph 4.5 and their Small Business Participation Plan, or 3) Unsatisfactory CPARS rating(s).
The Off-Ramp methods include, but are not limited to:
(1) Contracting Officer determines that exercising an Option is not in the Government's best interest, therefore the Government would allow the Contractor's contract term to expire.
(2) Debarment, suspension, or ineligibility as defined in FAR Subpart 9.405-1, 9.405-2
(3) Termination as defined in FAR Part 49.402, 49.403
4.8 Cross Teaming.
4.8.1 Cross-teaming. A teaming arrangement in which prime Contractors participate as a subcontractor/team member with another Prime or team member/subcontractor and/or subcontracts/ teams with more than one prime Contractor. Contractors may, for example, compete as the Prime for one team and a subcontractor for another team. FAR Subpart 9.6 notes that Contractor team arrangements can benefit the Government by enhancing capabilities, performance, cost, and delivery factors. These arrangements can provide significant business benefits to the teaming partners, such as enhanced system and subsystem capabilities, a more substantial and relevant past performance record and greater diversity, and ability to meet small business preferences and goals. It is the Government's policy to recognize the integrity and validity of Contractor team arrangements and to not restrict the market provided the arrangements are identified and company relationships are fully disclosed in an offer, or for arrangements entered into after the submission of an offer, before the arrangements become effective.

4.8.2 Joint-Ventures (JV); will be allowed under this acquisition, FAR 4.102(d) applies. A JV shall state if they are incorporated or unincorporated, populated or unpopulated and be recognized by law in the state where it is created and be acceptable when applicable as an appropriate legal entity by the Small Business Administration (SBA). The Government views JVs the same as a Prime awardee.
4.8.3 Mentor/Protege (MP); will be allowed under this acquisition, under the rules set forth in 13 CFR 124.520.
4.8.4 The Government may request procedures as referenced in FAR 42.12, Novation and Change-of-Name Agreements, be implemented and may suspend a Prime Contractor team or individual subcontractor from the contract team until all contract administration procedures are completed.
4.8.5 Post-award management of teaming, subcontracting, JV and MP agreements. See Clause 52.244-2 - Subcontracts, that is incorporated by full text in this contract. The Government will recognize on this acquisition the Contractors approved purchasing system for subcontracting.
SECTION 5 -- ORDERING PROCESS
5.1 Pools Awarded
The Contractor has been awarded a contract for participation in Pool 1 - Unrestricted/Full and Open Competition.
All Contractors awarded a contract in Pool 1 will be given a fair opportunity to compete for Task Orders issued in Pool 1 above $15M dollars and based on the Independent Government Cost Estimate (IGCE), unless the order includes requirements for Chemical, Biological, Radiological & Nuclear (CBRN) Laboratories or the order is excepted from fair opportunity competition in accordance with FAR 16.505(b) and DFARS 216.505. No order competed under Pool 1 will be set-aside for exclusive small business participation (nor for any small business socio-economic program sub-category such as service disabled veteran owned or woman-owned) even if there are two or more such small businesses likely to submit acceptable, reasonably priced offers for orders released in Pool 1. A Pool 1 Contractor that changes its size status to small business during the ordering period of this contract, as a result of the re-representation process described at FAR 19.301-3, will not be authorized to off-ramp from Pool 1 to Pool 2. It will be permitted to complete performance on TOs already awarded to it (including exercise of TO options not yet exercised) and will be permitted to propose on additional Fair Opportunity proposal requests (FOPRs) released for Pool 1, unless a Pool 1 Contractor is removed under the Off-Ramp procedures detailed in Section 4.
5.2 General Ordering Process for TOs:
5.2.1 The ordering process for TOs is documented in the IAC MAC Fair Opportunity Ordering Procedures in Section J. This Guide may be unilaterally updated by the IAC PMO over the life of the contract as needed. In case of any conflict between the IAC MAC Fair Opportunity Ordering Procedures and the contract PWS, the PWS shall take precedence. Updated procedures will be distributed to the IAC MAC Contractors.
5.3 Authorized Ordering Offices
5.3.1 The following Ordering Offices may solicit, award and administer orders against this contract. This list is subject to change. The primary ordering office is AFICA/KD. All authority to issue orders against this contract will be delegated by AFICA/KD:
a. Primary Ordering Office and Contracting Office for the IAC MAC:
Air Force Installation Contracting Agency/KD (DoD IAC Support)
5.4 Individual Task Order Clauses
5.4.1 Individual TOs may require unique clauses (e.g., Prohibition on Contracting with the Enemy in the United States Central Command Theater of Operations, intellectual property clauses, etc.) that are not contained in the basic IDIQ contract. These will be included in the FOPR/TO at the discretion of the Ordering Officer, as long as they do not conflict with the clauses and other terms in the basic IDIQ contract. In the event of any inconsistency between the contract and any TO order, the contract shall take precedence.
SECTION 6 -- PUBLICATIONS AND REFERENCES
See Section J - Issuances Affecting Operation of the DoD IACs. Additional publications and references applicable to individual TOs will be specified in the TO's PWS.
SECTION 7 -- ACRONYMS
Acronym Meaning

AALAS American Association for Laboratory Animal Science
ACC Army Contracting Command
ACOR Alternate Contracting Officer's Representative
AFICA Air Force Installation Contracting Agency
ASD R&E Assistant Secretary of Defense for Research and Engineering
AR Army Regulation
BCO Basic Center of Operations
BSL3 Bio-Safety Level 3 Lab
C4ISR Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance
CAR Corrective Action Request
CBRN Chemical, Biological, Radiological & Nuclear
CDC Centers for Disease Control
CDRL Contract Data Requirements List
CFR Code of Federal Regulations
CIP Critical Infrastructure Protection
CMMI Capability Maturity Model Integration
CMR Contractor Manpower Reporting
CO Contracting Officer
COCOM Combatant Command
COMSEC Communications Security
COOP Continuity of Operations
COR Contracting Officer's Representative
COTS Commercial-off-the-shelf
CPARS Contractor Performance Assessment Reporting System
CR/TA Critical Reviews and Technical Assessments
CS Cyber Security and Information Systems
CSC Customer Support Cell
CSDC Customer Shared Direct Cost
CSIAC Cyber Security and Information Systems Information Analysis Center
D&F Determination and Findings
DFARS Defense Federal Acquisition Regulation Supplement
DIACAP Department of Defense Information Assurance Certification and Accreditation Process
DNA Deoxyribonucleic Acid
DoD Department of Defense
DoDD Department of Defense Directive
DoDI Department of Defense Instruction
DoD-R Department of Defense Regulation
DoD-M Department of Defense Manual
DS Defense Systems
DSIAC Defense Systems Information Analysis Center
DSS Defense Security Service
DTIC Defense Technical Information Center
EPA Environmental Protection Agency
FAR Federal Acquisition Regulation
FDA Food and Drug Administration
FIFRA Federal Insecticide, Fungicide and Rodenticide Act
FOPR Fair Opportunity Proposal Request
FTE Full Time Equivalent
FTR Final Technical Report
GFE Government Furnished Equipment
GFP Government Furnished Property
GLP Good Laboratory Practices
GMP Good Manufacturing Practices

GP Government Property
GPS Global Positioning System
HD Homeland Defense and Security
HDIAC Homeland Defense and Security Information Analysis Center
HTML Hyper Text Mark-up Language
IA Information Assurance
IAC Information Analysis Center
IAW In accordance with
IDIQ Indefinite Delivery/Indefinite Quantity
IED Improvised Explosive Device
IGCE Independent Government Cost Estimate
IO Information Operations
IS Information Systems or Information Sharing
ISO International Organization for Standardization
ISR Intelligence, Surveillance and Reconnaissance
ISS Information Support System
IT Information Technology
JTR Joint Travel Regulations
KM Knowledge Management
MA Mission Assurance
M&S Modeling and Simulation
MAC Multiple Award Contract
MIPR Military Inter-Departmental Purchase Request
MIST Man-in-Stimulant Test
MSR Monthly Status Report
NDE Non-Destructive Evaluation
NISPOM National Industrial Security Program Operation Manual
NTA Non-Traditional Agent
NTB Notes to Buyer
NTIS National Technical Information Service
O&M Operations and Maintenance
OCI Organizational Conflict of Interest
OCONUS Outside the Continental United States
ODC Other Direct Cost
OMB Office of Management and Budget
OPSEC Operational Security
OSD Office of the Secretary of Defense
PM Program Manager
PMA Program Management Analyst
PMO Program Management Office
PWS Performance Work Statement
RA Requiring Activity
R&D Research & Development
RDT&E DoD Research Development Test and Evaluation
RMF Risk Management Framework
RMQSI Reliability, Maintainability, Quality, Supportability and Interoperability
SME Subject Matter Expert
SOP Standard Operating Procedure
SS Services Summary
STI Scientific and Technical Information
STIP Scientific and Technical Information Program
TAT Technical Area Task
TO Task Order
TR Technical Report

TSCA Toxic Substances Control Act
WAR Weekly Activity Report
WMD Weapons of Mass Destruction
WWW World Wide Web
XML Extensible Markup Language

The Requirements text has been modified to:

FA807518D0007

The following Reference changes for this section have been made:

INFORMATION	FROM	TO
Defense Priorities Allocation System (DPAS) Priority Rating	DO-C9	

Section I - Contract Clauses

Miscellaneous text in this section has been modified to:

CONTRACT CLAUSES ADDED BY REFERENCE
52.215-10 -- Price Reduction for Defective Certified Cost or Pricing Data (Aug 2011)
52.215-12 -- Subcontractor Certified Cost or Pricing Data. (Class Deviation 2018-O0015) (May 2018)

Additional Information/Notes

The following clauses were modified:

52.215-19 - Notification of Ownership Changes Oct 1997 hereby reads as follows:

52.215-19 - Notification of Ownership Changes Oct 1997 hereby reads as follows:
52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)
(a) The Contractor shall make the following notifications in writing:
(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.
(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.
(b) The Contractor shall--
(1) Maintain current, accurate, and complete inventory records of assets and their costs;
(2) Provide the ACO or designated representative ready access to the records upon request;
(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and
(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.
The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).
(End of clause)