AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES	
U	1	5

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
10	01-Nov-2009	N0002410MR55031.00	N/A

6. ISSUED BY	CODE	7. ADMINISTERED BY *(If other than Item 6)*	CODE
Naval Sea Systems Command (NAVSEA) BUILDING 197, ROOM 5w-27301333 ISAAC HULL AVENUE SE WASHINGTON NAVY YARD DC 20376-2040	N00024	DCMA MARYLAND 217 EAST REDWOOD STREET, SUITE 1800 BALTIMORE MD 21202-5299	S2101A

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State, and Zip Code)*

Gryphon Technologies, LC
6301 Ivy Lane Suite 300
Greenbelt MD 20770

CAGE CODE 05TP2 FACILITY CODE 942207838

9A. AMENDMENT OF SOLICITATION NO.

9B. DATED *(SEE ITEM 11)*

[X]

10A. MODIFICATION OF CONTRACT/ORDER NO.
N00178-04-D-4061-EH04

10B. DATED *(SEE ITEM 13)*
19-Dec-2008

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 one (1) copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

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

SEE SECTION G

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(*) [X]	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A. Far part 43.103 (b)
[ ]	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation date, 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 [X] is not, [ ] is required to sign this document and return __ copies to the issuing office.

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

SEE PAGE 2

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
15B. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY *(Signature of Contracting Officer)*	16C. DATE SIGNED 25-Nov-2009

GENERAL INFORMATION

The purpose of this modification 10 to Task Order N00178-04-D-4061-EH04 under section B, Supplies or Services:

a.
b.
c.
d.

Accordingly, said Task Order is modified as follows:

1) Under Section B, Supplies and Services:

a.

SLIN	Description	Start Date	End Date

b.

ITEM	CHANGE	LABOR HOURS	EST. COST	FIXED FEE	CPFF
1001AA					
	FROM:				
	BY:				
	TO:				

ITEM	CHANGE	LABOR HOURS	EST. COST	FIXED FEE	CPFF
1001AF					
	FROM:				
	BY:				
	TO:				

ITEM	CHANGE	LABOR HOURS	Est. Cost	Fixed Fee	CPFF
1001AP					
	FROM:				
	BY:				
	TO:				

ITEM	CHANGE	LABOR HOURS	Est. Cost	Fixed Fee	CPFF
1001AZ					
	FROM:				
	BY:				
	TO:				

said option is exercised.

Note C: In accordance with Section M, the Government reserves the right to award up to three Task Orders.
Award Term Item to which the AWARD TERM clause in SECTION H applies and which is to be supplied only if and to the extent said Item is earned, retained and awarded in accordance with the AWARD TERM PLAN provided in SECTION H. Notwithstanding the word "Option" which appears in the Section B CLIN description or elsewhere in this Task Order, for Award Term Items, Award Terms are not "Option" Items.

Note D: ODC-

Note E: Task Order requirements that apply to the divison of work between prime contractors, subcontractors and small businesses are as follows:

- Large busines prime contractors shall perform a minimum of 40% of the total work effort.
- Small business prime contractors shall perform a minimum of 30% of the total work effort.
- Large business prime contractors shall subcontract at least 25% of the work effort to small businesses.
- No single subcontractor shall perform more than the prime contractor.
- A prime contractor may be a subcontractor to another prime contractor.

CONTRACT SUMMARY FOR PAYMENT OFFICE (COST TYPE)(NAVSEA) (FEB 1997)

This entire contract is cost type.

PAYMENTS OF FEE(S) (LEVEL OF EFFORT) (NAVSEA) (MAY 1993)

(a) For purposes of this delivery order, "fee" means "fixed fee" in cost-plus-fixed-fee level of effort type delivery orders.

(b) The Government shall make payments to the Contractor, subject to and in accordance with the clause in this contract entitled "FIXED FEE" (FAR 52.216-8) or "INCENTIVE FEE", (FAR 52.216-10), as applicable. Such payments shall be equal to _____ percent ( ) of the allowable cost of each invoice submitted by and payable to the Contractor pursuant to the clause of this contract entitled "ALLOWABLE COST AND PAYMENT" (FAR 52.216-7), subject to the withholding terms and conditions of the "FIXED FEE" or "INCENTIVE FEE" clause, as applicable (percentage of fee is based on fee dollars divided by estimated cost dollars, including facilities capital cost of money). Note: CLINs 0003, 0006 and 0009 are "Cost Only". Total fee(s) paid to the Contractor shall not exceed the fee amount(s) set forth in this contract.

(c) The fee(s) specified in SECTION B, and payment thereof, is subject to adjustment pursuant to paragraph (g) of the special contract requirement entitled "LEVEL OF EFFORT." If the fee(s) is reduced and the reduced fee(s) is less than the sum of all fee payments made to the Contractor under this contract, the Contractor shall repay the excess amount to the Government. If the final adjusted fee exceeds all fee payments made to the contractor under this contract, the Contractor shall be paid the additional amount, subject to the availability of funds. In no event shall the Government be required to pay the Contractor any amount in excess of the funds obligated under this contract at the time of the discontinuance of work.

(d) Fee(s) withheld pursuant to the terms and conditions of this contract shall not be paid until the contract has been modified to reduce the fee(s) in accordance with the "LEVEL OF EFFORT" special contract requirement, or until the Procuring Contracting Officer has advised the paying office in writing that no fee adjustment is required.

SECTION C DESCRIPTIONS AND SPECIFICATIONS

1. FUNDING

The funding indicated below shall be utilized for the particular type of work described herein.

RDT&E: Technology development, prototype development requirements definition, preliminary design, contract design, test and evaluation support, concept development, feasibility studies, design tools, design reviews, product improvement (outside performance envelope).

SCN: Acquisition support of new construction surface ships to include detail design support, ship acceptance tests and trials, final contract trials, initial outfitting and ship post delivery support, shipboard installation support (new construction ships), engineering & integration supporting new construction ships, develop Navy training plan for new construction ships, program management support of new construction ships, logistic support of new construction ships, production engineering for new construction ships, quality assurance (new construction ships). Engineering support of Advanced Procurement, construction and long lead material procurement.

O&MN: Maintenance, training, operational support, reliability & maintainability analysis, general management support, general office support, staffing analyses, support of web sites, engineering & integration supporting active fleet ships, business and financial manager support, logistic support of active fleet ships, engineering support of active fleet ships.

NDSF: All of the above when in support of ship programs funded by NDSF.

FMS: All of the above when in support of ship programs funded by FMS programs.

OPN: Modernization support, shipboard installation support for OPN funded systems, shipalt support, program management support of OPN funded systems, logistics support of OPN funded systems, engineering support of OPN funded systems, production engineering for OPN funded systems, product improvement of OPN funded systems (within performance envelope), quality assurance (OPN funded systems), equipment procurement support.

2. BACKGROUND

This task order is for the procurement of professional services support for the Naval Systems Engineering Directorate (SEA 05). Services required include naval architecture, engineering, ship design project management, ship design team and site support, technical library management, in service technical support and related engineering disciplines.

These services will include advanced ship and vehicle concept development; future fleet force concept development; design tools, ship design standards, processes and criteria development; comparative naval architecture; conversion and new construction concepts, naval architecture, marine engineering, preliminary design; contract design; systems engineering; preparation of specifications and technical data packages, design related acquisition program or project support, detailed design engineering and review; production engineering support, and other lifecycle engineering for surface ships and other surface vehicles, aircraft carriers, and submarines and other submersibles.

The engineering and technical work applies to research and development, new designs, construction, conversions, modernizations, and fleet support of all surface ships, submarines, and aircraft carriers under U.S. Navy Cognizance, including work performed under Navy cognizance for other U.S. government agencies or foreign countries. The work also applies to special studies and program in the naval engineering field as well as development and update of technical directives, standards, specification, design data sheets, instructions and drawings.

3. SCOPE OF WORK

The scope of work is described below. First it is synopsized. Then the scope of work is described as general requirements in the context of phases of, and/or activities that, constitute ship design, acquisition and support. Finally, the scope of work is organized into task areas with specific tasks that the contractor will conduct to support those phases and/or activities.

A. SYNOPSIS OF REQUIREMENTS

Provide engineering support to SEA 05 throughout the various phases of ship design, acquisition and support from concept studies to preliminary design, contract design, detailed design and construction, and life cycle support including, but not limited to, the following services:

In general, provide systems engineering analysis, reviews, studies, documentation and recommendations related to the development, interoperability, integration, operations, maintenance, sustainment, and disposal of the ship, including its systems, subsystems and equipment.

Review engineering and technical documentation, to determine compliance with engineering standards, and technical accuracy and adequacy in relation to functional, operational, and technical requirements.

Provide engineering and technical support to assist in resolution of emergent technical problems.

Provide Integrated Data Environment support and Computer Aided Design/Computer Aided Engineering support.

Conduct reliability, maintainability, availability, and environmental safety and occupational health analyses and reviews.

Provide subject matter technical expertise for meetings, presentations, inquiries and action item resolution.

Assist in the insertion of science and technology, including Small Business Innovative Research (SBIR), Manufacturing Technology (MANTECH) and Future Naval Capabilities (FNC) processes. Provide information and recommendations in response to Congressional, DOD, other Government agency, media, industry, or individual inquiries, and audits.

Undertake studies deemed necessary by SEA 05 in support of emerging requirements or to address ship technical issues. These services shall be provided to NAVSEA during all phases of a ship acquisition process. The contractor shall provide a labor mix appropriate for each phase of the ship acquisition process. The contractor shall provide professional services in project management, engineering, technical library management, and related disciplines.

Provide support for international programs and international data exchanges.

Prepare documentation to support and trace design decisions and evolution. Document design requirements, assumptions, and results.

B. GENERAL REQUIREMENTS (in the context of phases of, and/or activities that, constitute ship design, acquisition and support)

The performance of work shall include, but is not limited to:

Concept Studies - Concept studies are generally “clean sheet of paper” development of new ship configurations, new ship types, evolutions of existing and/or previous ship classes. These studies are done in support of naval mission capabilities identification, new technology planning and assessment, analysis of alternative (AoA) studies, strategic planning, wargaming, and other efforts in support of the Navy After Next. These studies can also include formulation and analysis of force level concepts of ship, unmanned vehicles and other force components and support to the Center for Innovative Ship Design.

Feasibility Studies - Feasibility studies provide an impact analysis of the ship and its major systems on Navy ships with a minimum amount of data/information. Contact with Type Commanders, ship personnel, Commander Fleet Forces Command (CFFC), the Naval Warfare Development Center (NWDC), and the Naval Surface Warfare Center (NSWC), etc., may be necessary to define desired ship capabilities and features. Efforts will be required to gather interface data, background data and information, to analyze the impact of the desired capabilities, characteristics, and features. Feasibility studies are used for both new ship designs and backfit or conversion of existing ships. Feasibility study investigations associated ship systems are more than just the definition and identification of the impact on the systems themselves. The investigations must be comprehensive and identify changes that may affect ship size, signatures, major equipment selection, arrangements, location, and size of main equipment rooms (e.g. identify the need for additional machinery space, etc.), desired ship/system performance, or to determine services safety, manning and security requirements.

Preliminary Design or equivalent - Preliminary design activity comprises the development required to provide an engineering description of the ship and each major system in terms of very rough system diagrams, layout drawings and performance characteristics. Tradeoff studies are accomplished to refine subsystem definition and to provide a basis for the selection of major components. The preliminary design must achieve a complete engineering description of an integrated ship system so that the basic ship size and definition will not change during contract design. Specific baseline requirements to be used in each preliminary design task will be defined by the Task Order Manager upon initiation of the design. The following documents are typical of those that are used to define the baseline for preliminary design

which may be furnished to the Contractor: Feasibility reports; Conceptual Design Reports; Requirements documents (Initial Capabilities Documents (ICD), draft Capabilities Development Documents (CDD)); Ship Characteristics; Preliminary System Performance Requirements; Interface Requirements; Safety and Security Considerations. In development of preliminary design of various ship systems, the contractor may be tasked to perform any of the following: Baseline definition; Establishment of design criteria and sources; Collection of interface data, information, and requirements; Conduct studies, analyses and investigations; Review interface documentation; Provide status of design developments reports; Presentation of design development; Documentation of design development; Develop or maintain Computer Aided Design models.

Contract Design or equivalent - During this phase, the results of the preliminary design must be validated and a greater level of design detail is normally developed. Contract design effort encompasses the preparation of the product model(s) and specifications required to provide an information package sufficiently detailed for negotiation of a construction contract with a ship builder. The ship and ship systems preliminary design deliverables, preliminary design reports, unresolved items and specifications and other documents establish the starting point of ship design. Shortly following the start of contract design, a baseline is established and configuration control is initiated. This control requires formal submission and approval of any changes. In development of various portions of contract design, the contractor may be tasked to perform any of the following: Define system baseline and develop criteria; Conduct special studies; Develop study sketches, calculations, notes and study drawings; Develop contract guidance drawings; Develop specification sections and inputs to various interfacing specification sections; Develop system development change reports; Develop a master equipment list for machinery systems; Develop configuration change request as necessary; Review interfacing documents and comment; Participate in and assist in circulation and review of the ship specification and adjudication of comments thereto and in preparation for and assistance during ship specification reading sessions; Develop design histories; Maintain design notebooks; Develop specific design documentation and reports; Assist in the design reviews of the preliminary design effort and resolve comments and recommendations; Develop or maintain Computer Aided Design models.

Detail Design, Construction, and Post Shakedown Availability (PSA) or equivalent - This phase supports new construction and lasts until the ship is completed. Tasks include review and approval (within specified timeframes) of various product models and/or drawings (system diagrammatic, arrangements, etc) and associated supporting documentation by the design agent (or his subcontractors). The items submitted for Headquarters review and/or approval also include but are not limited to: Shipbuilder forwarding letter; Supervisor of Shipbuilding (SOS) forwarding letter; System Description; System and equipment calculations. The following documents are used to define the baseline ship for which detail design support efforts may be required of the contractor: Detail ship specifications with all changes (Headquarters Modification Requests (HMRs), Field Modification Requests (FMRs) and modifications thereto); Contract Data Requirements List (CDRLS); Contract and Contract Guidance Drawings; Study Drawings; Military STANDARD MIL - STD-777 and applicable revision; Contract Design Change Reports, Preliminary Design Development; Reports and/or Impact Analysis report (if available); Contract design and Preliminary Design histories (if available); Contract Design and Preliminary Notebooks (if available); On site (shipyard or industrial activity) technical support for construction or PSA; ShipAlt Proposals (SAPs), ShipAlt Records (SARs), Justification of Cost Forms (JCFs) and Ship Change Documents (SCDs).

The number and type of systems involved in detail design support efforts are a function of the particular ship detail specifications.

In-Service Ship Design and Engineering - In-service surface ship design and engineering supports the fleet and handles class wide technical issues applying total ship systems engineering to maintenance, repairs and modernization. Additionally, In-service Ship Design and Engineering are primary first responders at NAVSEA to incidents that require technical guidance and response. Class specific technical issues addressed, include but are not limited to, SCD evaluations, TAT approval, and ICMP deferral adjudication. In-service Surface Ship Design and Engineering representatives interface with Engineering Field Representatives, Ship Maintenance Teams, Regional Maintenance Center and Naval Shipyard Chief Engineers (CHENGS) and Technical Warrant Holders (TWHs). In-service Ship Design and Engineering provides technical resolutions working across the program managers, PARMs and technical boundaries. Fleet modernization design engineering is done in support of major upgrades of existing ships and ship classes, as well as the latter flight of ships on programs that span a length of several years. These design engineering efforts are associated with the management of future (proposed and/or approved) military and technical improvements and changes. These efforts are similar to a new ship design effort in that it is an integration of a number of design disciplines aimed towards a single goal or objective. The significant difference between a modernization design effort and a new ship design effort is the existence of a baseline ship for which the requirements are defined. Also, there is documentation available (e.g., Ship Information Books (SIBs), Damage Control (DC) Books, Technical Manuals) that define the baseline ship. One of the significant tasks in a modernization design which may be required of the contractor, is the verification or definition of the currency of the baseline ship with the documentation. Modernization design integrates many military and technical improvements, many in the form of SHIPALTS and/or proposals, not only to eliminate conflicts between/among such improvements, but also to determine if baseline ship resources can adequately handle total package of improvements. The more important product of a modernization design effort are SHIPALTS and/or proposals that identify changes to new baseline resources either unknown or unplanned for the lifecycle operation of the ship.

Shipboard Installation Support - Provide support for various ship systems and shipboard equipment installations on both new construction and active fleet ships. This involves on board technical support during installation with redesign and documentation revision as appropriate. Alignment and calibration support may be involved as well as trouble-shooting and testing.

Independent Design Reviews - Participate in independent design reviews involving in-depth investigation and analysis of a system, subsystem, or equipment for the purpose of identifying problem areas, technical deficiencies, and recommended design solutions. An independent design review team is usually composed of a varied team of government employees, industry representatives, and support contractors who have sufficient expertise to conduct the analyses. Reviews will encompass examination of top level requirements and specifications, reliability, maintainability, and availability data, suitability of equipment/system for intended purpose, operational characteristics, human factors, safety, cost, size, and weight. At the conclusion of an independent design review, prepare a comprehensive report of the

findings and recommendations including redesign proposals as appropriate.

Special Studies - Contractor may be tasked to perform special studies on ships, ship systems and shipboard equipment. These studies involve the solution of problems that degrade the operational performance of hull, mechanical, and electrical systems, and related equipment which go beyond the narrow scope of technical changes and product improvements. Solutions will consider improvements in shipboard operator/maintainer training, integrated logistic support documentation, spare parts support, and repair recommendations. Such non-technical improvements may be accomplished in conjunction with or as alternatives to product improvements. Solution development involves interim as well as long term (or final) fixes. The contractor will be required to prepare appropriate reports.

ABS Rules for Building and Classing Naval Vessels - This effort shall include the development and maintenance of the technical criteria used in determining technical acceptability as a part of classification. The contractor shall complete the development of technical criteria for applicable programs which will be in the form of ABS Rules for Building and Classing Naval Vessels (NVR) for use in the acquisition process of Naval combatant ships. The NVR is written to be applicable to any non-nuclear US Navy surface ship, with a special focus on those typically designed using combatant standards. The NVR will be used in conjunction with a collection of military-unique appendices provided by NAVSEA to cover all functional areas of a warship and address all aspects of verification, validation and certification.

Application of other American Bureau of Shipping (ABS) rules (non-NVR) and US Coast Guard (USCG) regulations to naval ship projects – This effort shall include the following: Regulatory body corporate history and issue management; Digital data management/collaborative work environment/integrated design environment; Project, logistic, and financial management; Physics based simulation, and visualization of designs; Technology management; Test and trial management; Engineering change proposal development for ships and production systems; Modernization (alteration) development; In-service ship modernization including in-service installations; Material selection and fabrication; Producibility studies; Standardization/reverse engineering; Independent design reviews; Failure modes and effects analysis; Ship systems integration; Prototype development; Ship model testing and other testing work in support of ship design; Ship certification; Design tools, standards, processes and criteria development and updates; Risk analysis; Historical ship design analysis and archiving of information and data; Comparative naval architecture and ship design.

C. TASK AREAS WITH SPECIFIC TASKS

ENGINEERING (Funded by RDT&E, SCN, OPN, O&M, NDSF, FMS)

E1: Hull Systems Engineering

Develop ship compartmentation, external arrangements, topside arrangements, and general access design. Develop and maintain the Weight Estimate. Develop, validate, and document the hull form, control surfaces, appendages, and stack configuration. Perform speed/power calculations, maneuverability assessments, seakeeping performance predictions, and hydrodynamic load analysis. Validate that the ship meets the stability and reserve buoyancy requirements. Develop the structural design of the ship including structural arrangements, stress analysis, scantlings, and design criteria. Develop space layouts for habitability (food service, sanitary, living, recreation, leisure & community), administrative, medical/dental, laundry, and stowage and issue room spaces. Develop and list hull outfitting equipment requirements. Develop a concept acoustic design with options for a total ship system solution to mitigate flight deck, machinery, HVAC, and fluid system airborne noise.

E2: Machinery Systems Engineering

Develop and/or oversee the design of the selected ship propulsion system(s), including the necessary calculations, studies, analyses, testing, and modeling and simulation to support the design. Develop and/or review the design and prepare drawings defining the arrangement of main and auxiliary machinery spaces, propulsion shafting, and combustion air intake and exhaust gas systems. Develop and/or describe the shipboard industrial facilities (workshops, etc.) to define equipment locations and space requirements. Define, develop, and document the design of the HVAC systems and refrigerating plants. Develop and/or review the design for all ship environmental systems, including the necessary calculations, studies, and analyses to support the design. Perform studies and prepare drawings for auxiliary equipment. Provide the documentation required to justify and trace detail design decisions and evolution. Perform studies and analyses, define, identify and document the design of components necessary for the ship’s electrical and degaussing systems. Develop and describe the machinery control systems. Perform studies and prepare drawings to describe the ship steering and motion control systems.

Provide engineering support for construction, alteration, testing, and sea trials of deck systems and machinery systems as follows:

a. Review and monitor detail design and installation of deck systems and machinery systems. Attend status reviews at NAVSEA, at the shipbuilding yards, and onboard ships, documenting discussions, findings, and recommendations.

b. Attend pre-trial reviews, providing reports of findings and recommendations to facilitate work-up of ship systems for trials.

c. Participate in ship sea trials and assist in the adjudication of trial deficiencies.

d. Attend design reviews at NAVSEA and vendor facilities, documenting discussions, findings, and recommendations.

E3: Warfare Systems Engineering

Establish the spatial adequacy of the Combat Systems compartments, and define the special installation arrangement requirements for those compartments. Set forth in design and engineering terminology the ship Combat System design requirements necessary to meet the performance requirements in the CDD. Analyze the Radiation Hazards (RADHAZ), i.e. Hazards of Electromagnetic Radiation to Personnel, Ordnance and Fuels (HERP, HERO, HERF), and Nuclear Electromagnetic Pulse (NEMP) in order to eliminate hazards to personnel and material. Determine and record the maximum achievable safe pointing and firing zones for guns, missiles, etc. onboard ship. Perform studies evaluating different topside arrangements in terms of the impact on weapons systems and emitters. Specify settings of cut-out cams, fixed stops, and computer software settings. Establish and record blast areas (temperature and pressure; positive and negative) which result from ordnance firing. Establish and record required settings for emitters and the resulting radiation zones. Define all operational events necessary to assure continuity of the man-machine interface as reflected on the Functional Flow Diagrams for use in determining/evaluating combat systems reaction time and the practicability of combined operations. Describe the operational relationships and procedures that take into account the design philosophy utilized in space allocations and arrangements, and provide operating personnel with station manning requirements, assigned responsibilities, and operational procedures. Eliminate or minimize Electromagnetic Interference (EMI) both above and below deck. Describe the operational relationships and procedures that take into account the design philosophy utilized in space allocations and arrangements, and to provide operating personnel with station manning requirements, assigned responsibilities, and operational procedures. Recommend/implement the transition of legacy combat systems to modern open-standard/architecture digital systems by leveraging existing technology refresh-capable, ruggedized Commercial Off The Shelf (COTS) equipment, systems and architectures. Determine, define and record the electrical/electronic/logical interrelationships between a Core Data Network (CDN) and other ship systems. Also, determine, define and record the electrical/electronic/logical interrelationships between these sub-systems, and the ship support systems.

E4: C4ISR Systems Engineering

Establish a comprehensive list of all Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems, equipment, and antennas. Establish the spatial adequacy of C4ISR compartments, and define the special installation arrangement requirements of those compartments. Depict the primary operational mode for each major operational function of all C4ISR systems and their primary data flow path. Enable the determination of the optimum interface of sub-systems to achieve the desired capability. Analyze the electromagnetic compatibility (EMC) of

equipment/systems resulting from design characteristics or physical arrangements/locations in order to eliminate or minimize Electromagnetic Interference (EMI) both above and below deck. Provide a plan to optimize the operational performance of topside HF/UHF/VHF Communications Antennas considering their location and the effects of ship's structure. Analyze the ship's susceptibility relative to electrical and physical security of electrical information processing systems. Identify the SHIP PROGRAM LAN architecture, infrastructure and design considerations, including open architecture. Provide systems engineering support to the SHIP program for development of the C4I Support Plan (C4ISP) and Integrated Architecture. Recommend/implement the transition of legacy C4ISR systems to modern open-standard/architecture digital systems by leveraging existing technology refresh-capable, ruggedized Commercial Off The Shelf (COTS) equipment, systems and architectures

E5: Mission Systems Engineering

Develop and describe the handling and stowage systems for Cargo/Ammunition (Ground), Aviation Ammunition, Stores, and United States Marine Corps (USMC) Vehicles including vehicle ancillary services in sufficient detail to provide arrangements, weight, and cost data. Develop, design and describe the replenishment system in sufficient detail so that sizing criteria, system arrangements, characteristics of main and auxiliary equipment, and estimated weights can be obtained. Develop and describe in sufficient detail to provide arrangement, weight, and cost data the following items: the Well Deck and Landing Craft Handling systems, Anchoring, Mooring, and Towing systems, Boat Handling and Unmanned Vehicles, small craft, and towed body interface (launch & recovery, and stowage and handling systems), Torpedo handling/stowage and Torpedo launch, and Medical and Dental facilities. Develop modeling and simulation (M&S) tools for demonstrating the functionality of the SHIP super system and ensure that the integration of all subsystems meet operational requirements. This M&S tool can be used to demonstrate the flow of weapons/cargo, vehicles and troops, along with sortie generation rates for both aircraft and landing craft onload/offload capabilities. This will also aid in providing detail to arrangements, weight and cost data for contract design initiation, and useful in identifying Shipboard workload reduction concepts.

E6: Human Systems Integration (HSI)

Conduct Human Systems Integration (HSI) across all ship/system boundaries and interfaces. A human-centered design approach shall be employed that optimizes manning, enhances human performance, and achieves the mission requirements. Address human factors engineering, human performance, manpower, personnel, training, survivability, system safety, and quality of life aspects of the ship/system design. Ensure that the ship/system design/design modification/modernization efforts or upgrade maintains optimized manning throughout the ship/system life cycle, minimizes total ownership cost, and provides the crew with a high quality of life.

Perform top-down-requirements analyses to allocate functions/tasks to hardware, software, or to personnel in support of total system performance, which includes human performance. Demonstrate that an optimized crew can effectively operate and maintain the ship/system.

Define the skills required for each task; work load (hours / week); and organization for each billet and off-board personnel required to operate, maintain, and support the ship/system over its operational spectrum.

Design a Total Ship System Training Architecture (TSSTA) that provides for a fully mission ready crew, including individual, team, and battle group training, and shore establishment. The TSSTA shall develop specified skills for watchstanding and on-board maintenance. The Contractor shall identify any changes in the U.S. Navy infrastructure, policy, statutes, organization, and procedures, necessary to operate and support the introduction and operation of the ship/system into the current force.

The following are applicable references, provided for guidance in HSI activities:

1) ASTM F1166-95a – Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities

2) ASTM F1337-91 – Standard Practice for Human Engineering Program Requirements for Ship and Marine Systems, Equipment, and Facilities

3) IEEE Std 1220-1998 – Standard for Application and Management of the Systems Engineering Process

Develop the Human Systems Integration (HSI) Plan. The HSI Plan describes the approach to developing and managing the ship/system HSI and manning requirements, HSI elements, and functionalities to ensure the attainment of ship/system human performance, safety, habitability, personal survivability, manning, personnel, and training objectives. The HSI Plan shall include ship/system HSI scope and structure, HSI engineering process and controls integrated with the systems engineering process, HSI Schedule, and the HSI engineering team composition, for all ship/system HSI activities, including manpower, personnel, training, human engineering, and Quality of Life (QOL). The HSI Plan identifies applicable standards and guidelines to ensure that ship/system HSI objectives are met, describes HSI activities and products at each phase of acquisition, identifies HSI measures of effectiveness and measures of performance, and describes studies and analyses to develop the training concept, workload reduction concept, and human machine interface design concept for the expected

worst case ship operational environments.

Develop the Navy Training Systems Plan (NTSP), which defines the training requirements and resources for emergent requirements and systems (including major subsystems, e.g. gun, munitions). The NTSP documents mechanisms for ensuring that emergent training requirements are met, and identifies personnel required to install, operate, maintain or in any way use the emergent system. The NTSP shall be prepared in consideration of the requirements of OPNAVINST 1500.76, “Navy Training System Requirements, Acquisition and Management” and NTRDM P-751-1-9-97, “Navy Training Requirements Documentation Manual.”

Develop the Manning Concept to provides a detailed description of the ship/system manning including:

a) Definition of each billet and description of tasks to be performed, workload (hours per week), and the skills required to perform each function.

b) Risks associated with each function and system; include mitigation measures and manning impact.

c) Personnel management concepts, such as crew rotation schemes; crew selection criteria, assignment, training, and deployment; shipboard organization including operational and administrative organizations to support battle management; platform management; operational guidelines for HM&E, damage control, and automation;

d) Analytical reports and/or test results supporting manning concept design including:

i) A Crewing Workload Analysis Report that validates the suitability of the crew size and composition to perform required {ship/system} missions, maintain ship systems and/or equipment, conduct shipboard evolutions, and provide necessary technical, engineering, material, logistics, and administrative support across the full spectrum of peacetime and wartime applications.

ii) A Crew Training Analysis Report that validates that crew level training is fully supportive of required {ship/system} missions and is sustainable.

Develop System Manpower, Personnel, and Training Policy Requirements. System Manpower and Personnel Policy Requirements serve to identify required or recommended changes to statutes, policies or doctrine in order to ensure realization of the {ship/system} manning concept and manpower, personnel, and training objectives.

Design human machine interfaces for operations and maintenance workstations and work sites based on an analysis of requirements for human interaction with automation, and techniques to automate, consolidate, eliminate, and simplify functions and tasks on legacy ships and systems. Specific attention will be given to reduction in human error in operations and maintenance, and making systems error tolerant.

Develop HSI Performance Metrics for the engineering design, risk management and test and evaluation of human performance at all workstations and work sites used for operations, maintenance and support.

E7: Total Ship Survivability Engineering

Develop and/or provide the design requirements for ship susceptibility. Ensure that the ship design will fulfill the Radar Cross Section, Acoustic Radiated Waterborne Noise, Infrared (IR), and Magnetic signature goals as specified in the CDD. Analyze the ship's proposed Combat Systems self defense capability. Assess the vulnerability of the ship design. Assist in the development and selection of ship protection features, which will enable the ship to fulfill the goals for survivability as specified. Ensure that the latest survivability features against AIREX threats are applied to the ship design so that the ship fulfills survivability goals as specified in the CDD. Ensure that the ship design will fulfill the UNDEX protection goals as specified. Ensure that adequate and latest Fire Protection, Damage Control, CBR warfare defense, and Recoverability capabilities are incorporated in the ship design in order to fulfill the goals for survivability as specified. Ensure survivability solutions are incorporated into the design package.

Develop and/or conduct survivability studies for hull, mechanical, and electrical systems and equipment. Develop and/or describe survivability/vulnerability methodology, perform and/or review ship vulnerability model studies, develop and assess shock hardening techniques, acoustic and non-acoustic signature, investigate fire and damage control aspects as they apply to ship survivability, and weapons effects, both conventional and nuclear. As necessary, the efforts will involve consideration of ballistic effects, thermal effects, electromagnetic pulse (EMP), nuclear air blast, underwater shock, and radiological, chemical, and biological warfare. Investigations and studies will involve total ship survivability system and subsystem survivability, and defense mechanisms.

Provide technical and management services in support of the development and design evaluation. This

includes Hull, Mechanical, and Electrical (HM&E) system analysis for survivability strengths and weaknesses. Perform identification of system compliance with basic principles of separation and redundancy. Research various HM&E systems to identify design issues in order to enhance the survivability of the ship. Provide support in the development of the total employment of these systems into a basic concept of operations (CONOPS). Review the Damage Control CONOPS as the system design matures. Develop and provide methods by which the design can be evaluated within the context of a variety of casualty scenarios. Support the planning and coordination of working groups and design reviews

E8: Aviation Systems Engineering

Develop and describe all facets of design related to aviation. Develop and describe the ship flight deck and hangar deck design and requirements, including: sizing, location of deck markings, servicing requirements and location, spotting, deck flow, placement and sizing of the aircraft elevators, helo control stations, hangar doors, Recovery Assist, Securing and Traversing (RAST) System, Jet Blast Deflector (JBD) and ski jump, maximum density spotting, and vertical replenishment (VERTREP) operations. Develop and describe the visual landing aids requirements and night vision device compatibility requirements in sufficient detail to provide arrangements, performance specifications, and cost data. Develop and describe aircraft maintenance facilities requirements to a level that permits optimum size and locations in the ship. Support aviation modeling and simulation efforts, including the development of a ship effectiveness model. Perform modeling and simulation to obtain airwake and thermal data with various ship and aircraft configurations. Provide support to incorporate existing or planned aircraft programs in order to assess their impact on ship design. Develop and describe ship aviation related C4I requirements, including: define the interfaces and the information products and services exchanged between the aviation and ship systems for mission planning and execution, support, and training. Specify communications, data links, and information systems as required.

E9: Engineering Design Data & History

Review, maintain and make recommendations with regard to engineering plans, program records, technical manuals, design histories, design configurations, databases, regulatory body and other documents. Maintain a digital technical library and database with paper backup. Prepare documentation to support and trace design decisions and evolution. Document design requirements, assumptions, and results. Implement requirements traceability mapping tools.

E10: Marine Regulatory Body & Commercial Standards

Evaluate issues and surface ship historical background to provide recommendations related to regulatory body and American Bureau of Shipping (ABS) issues, including statutory compliance. Review, and provide recommendations on total commercial ship and ship system performance specification and design and certification issues. Maintain a legacy specification or requirements document incorporating lessons learned over the course of the program.

E11: Computer Aided Design & Engineering.

Provide digital engineering support services, which includes Computer Aided Design, Computer Aided Engineering, and modeling and simulation-based analyses. Provide an Integrated Design Environment.

E12: Test and Evaluation Engineering

Draft, analyze, review, and provide recommendations on test and evaluation program planning, provide installation, testing, execution documentation and checkout support of ship and mission systems and participate in tests and trials. Conduct testing of ship systems and equipment. Tests may be either shore based or on board ship and are conducted for the purpose of demonstrating compliance with published specifications, drawings, etc., and demonstrating attributes such as workmanship, alignment, strength, rigidity, tightness, and suitability for the purpose intended. During these tests, the contractor will arrange for the provision of all necessary materials, power, equipment, instrumentation, and personnel to conduct each test. Appropriate documentation, test plans, test agenda, and test reports will be prepared by the contractor. Participate in various ship trials. These trials include Acceptance Trials, Final Contract Trials, Standardization Trials, Vibration Trials, Machinery Performance Trials, Dock Trials, Post Repair Trials, Shock Trials, and other special trials. Perform specific scientific, operational, and physical tests and evaluations in support of developmental items. Provide engineering support during trial card meetings and screening conferences. Conduct a technical evaluation of responses to all trial cards to verify the feasibility of the response and compatibility with ship systems. Provide a surge trial card team during peak trial card activity to investigate and resolve trial cards that impact HM&E systems in conjunction with the trial card coordinator and NAVSEA technical codes.

E13: Reliability, Maintainability, Availability Engineering.

Conduct reliability, maintainability, availability, transportability, hazard, environmental, occupational health, system safety, risk analyses, and other system engineering analyses. Provide reports, plans, and other substantiating documentation as required. Provide support for the development, implementation, and maintenance of an engineering database consisting of equipment operating times; Reliability, Maintainability, and Availability (R/M/A) data; Configuration Management and Maintenance; etc. This effort includes collection and development of engineering data and providing the data in reports which identify equipment configuration, repair/failure history, maintenance projections, and R&M projections. The data base is sufficiently adequate for projecting requirements for spare engine, depot repair projections, modification kit requirements, special support equipment and systems stock planned program requirements. Develop and provide maintenance plans with schedules identifying periodic inspection and maintenance actions required by the maintenance projections.

E14: Failure Modes and Effects Analyses

Conduct failure modes and effects analyses and prepare appropriate reports. A failure modes and effect analysis is an organized procedure for identifying evaluating, and analyzing all known potential failure modes for the equipment/system in question, together with the causes and the proposed actions to inhibit such failures or reduce their criticality. All detection mechanisms and backup means of operation for a given failure mode shall be identified. For all single-point failure mode (where no redundancy exists in the design) any compensating provisions such as failure indicators, fail-safe features, securing mechanisms, and alarms shall be identified. Where there are no compensating provisions, justification shall be provided for their lack of adequate compensating provisions recommended.

E15: Materials Engineering

Provide support in the development, analysis, testing and certification of materials and their application. Provide support in the areas of materials engineering, and materials quality assurance and reliability. Work consists of specification development and revision, evaluation of new materials, recommendation/selection of materials for specific applications, testing of selected materials (both destructive and non-destructive), failure analyses, and fabrication and joining techniques, among others.

E16: Ship Certification

The contractor shall provide ship and ship system certification support to include as a minimum:

development or evaluation of Total Ship Certification strategies and plans; development or evaluation of individual system certification requirements and associated design rules, certification criteria & procedures; development or implementation of certification documentation including the management of Objective Quality Evidence to support certification determinations by cognizant technical authorities; and, engineering analysis and technical support for the planning & execution of a comprehensive Total Ship Certification Program on a given ship. This will also include liaison to, or participation with, the American Bureau of Shipping (ABS).

E17: Total Ship Systems Integration

Perform total ship system integration. Total ship systems integration is the amalgamation of the principal design products and trade-off studies during the ship design process into a design package that synthesizes all shipboard subsystems into a total ship system. In this process, all technical aspects of the design are required to be coordinated, configuration control managed, new technologies prioritized and evaluated from a risk/reward basis, and inconsistencies or incompatibilities between ship subsystems resolved. Ship system integration tasks may also be assigned during ship modernization and conversion. Establish and control major ship interfaces to support modular payloads. The contractor shall conduct ship surveys and audits to identify, evaluate, and resolve ship systems engineering discrepancies that impact ship performance. Provide technical services at meetings, technical reviews and program reviews. Interface with NAVSEA technical codes, Program Office, shipbuilders, planning yards, Navy Labs, Supervisors of Shipbuilding and support contractors to evaluate and resolve technical issues.

E18: Integrated Topside Design (ITD)

Perform comprehensive topside design integration. ITD is a Systems Engineering and integration effort that treats all ship topside structures, associated equipment and cooperating elements as a total ship topside system while considering the impact of the mechanical, climatic, environmental, signature and electro-magnetic environmental effects upon the whole system. Integrated Topside Design shall be performed in accordance with the Integrated Topside Design and Certification Process for New Construction Ships and the Integrated Topside Design and Certification Process for In-Service Ships.

E19:Design for Production / Producibility Engineering Studies

Conduct design for production engineering efforts to develop recommended changes to ship design to improve the producibility. Develop generic build and/or production strategies. Conduct producibility engineering studies on various ship systems and equipment, identifying and evaluating alternatives in designs which could reduce construction and/or fabrication costs or time. Identify and evaluate changes in ship materials, equipment, or configuration which have potential construction cost savings and

favorable impact upon weight or performance. Identify changes which could reduce maintenance burden or reduce numbers of parts thereby enhancing utility over the life cycle.

E20:Value Engineering Studies

Conduct value engineering studies on various ship systems and equipment, identifying and evaluating alternatives in designs which could reduce construction and/or fabrication costs or time. Identify and evaluate changes in ship materials, equipment, or configuration which have potential construction cost savings and favorable impact upon weight or performance. Identify changes which could reduce maintenance burden or reduce numbers of parts thereby enhancing utility over the life cycle.

E21: Standardization and Reverse Engineering

Develop Navy owned designs for ship equipments including (as appropriate) reverse engineering (forensic analysis of existing equipments for materials, fabrication techniques, dimensioning, and tolerancing). Unique designs will be produced for individual equipment or families of equipment, including but not limited to a series of fire pumps, winches or valves with differing capacities.

E22: Product Model, Drawing Preparation and Review

Develop and produce the following ship design products:

Ship design product models and drawings;

Ship construction product models and drawings;

Selected record drawings;

Installation control drawings;

Ship equipment drawings (including outline drawings, assembly drawings,

subassembly drawings, parts lists, JCFs, SAPs, SARs, SCDs);

Non-deviation drawings;

Standard and Type drawings;

Project peculiar documents.

Provide appropriate levels of review of any such product models and drawings. Reviews may be required for format, technical feasibility, dimensioning and tolerancing, producibility, technical accuracy, or any combination of the foregoing.

E23: Models and Mockups

In support of certain engineering tasks, construct feasibility models or mockups of various ship systems and equipment and assemble items or developmental equipment for shipboard tests and simulations. This includes electrical breadboarding, scale study models of handling equipment, compartment arrangement models, etc. Extensive use of computer aided design and simulations is anticipated.

E24: Hull Form Engineering

Provide technical and scientific efforts in support of hull form research and development engineering efforts in the areas of Hull Form Studies, Risk Assessment, Wind and Wave Effects, Theory Advisory, Dynamic Stability, and Computational modeling.

PROJECT MANAGEMENT (Funded by RDT&E, SCN, OPN, O&M, NDSF, FMS)

PM1: Project Work Schedule, Cost Management

Provide formal management systems and processes to manage work schedule and cost, specifications, configuration management, and product quality assurance.

PM2: Ship and Ship Systems Cost, Schedule and Performance Management

Evaluate issues and provide recommendations related to ship, ship system, and information system cost, schedule, and performance.

PM3: Technical and Detail Design Management Review

Manage the technical studies, design, design reviews, problem resolution, and life-cycle monitoring work. Support design meetings, zone reviews, program reviews and conferences.

PM4: Technical Action Item Tracking.

Maintain a computer based action item tracking system to track all technical work done in support of ship projects.

PM5: Specification Development Process & Management

Manage development and decision basis of performance-based specifications, circulars of requirements, and other specifications.

PM6: Configuration Management

Contractor shall provide technical and engineering services in support of configuration management. Configuration management is a discipline that integrates the technical and administrative actions of identifying the functional and physical characteristics of an item during its life cycle, controlling changes to those characteristics and providing information on the status of change actions. Configuration management is comprised of three major areas of effort: identification; control; and status accounting. The contractor will provide technical support for configuration management in all phases of the life cycle of a configuration item. This entails conducting configuration audits, identifying items, establishing and maintaining databases, engineering change proposal preparation and tracking, participation in technical reviews, and preparing of appropriate reports during the ship design.

PM7: Engineering Change Proposal Development

Changes and improvements during the detail design development may be necessary. These can result from directed changes in basic requirements or from discrepancies in specifications or contract design drawings. In most cases, these changes and improvements will be implemented by Engineering Change Proposal (ECP) in coordination with the Ship Acquisition Program Manager (SHAPM).

Contractor tasks may include the following:

Identification during detail design review, of changes, and improvements that may require ECP action

Development of preliminary ECP's for review & comment

Participation in preliminary ECP review meetings

Development of final ECP's for presentation to SHAPM change control board

Review of resulting detail design changes developed in response to an approved ECP

PM8: Computer Aided Design Management.

Manage efficiently design and design integration using 2-D computer aided design tools; 3-D product modeling tools; structural, hydrodynamic, and various engineering software tools.

PM9: Project Team Integration

Provide processes to manage multi-disciplinary project teams. Teams may include personnel from other companies, shipyards, or Navy activities (i.e. Naval Surface Warfare Center).

PM10: Classified Project Design Site Process/Management

Maintain management processes to work on classified projects up to Secret within the Design Site described in Design Site task 1 (DS1) below.

ENGINEERING MANAGEMENT SUPPORT (Funded by RDT&E, SCN, OPN, O&M, NDSF, FMS)

EM1: Total Ship Systems Engineering Team/Integrated Product Team Management Support

Arrive at fiscal estimates and schedules to satisfy engineering team/integrated product team (IPT) requirements. Ensure each task is scheduled to permit the most continuous flow of activity and to make all participants aware of changes in direction. Be responsible for ensuring all engineering team/IPT products are integrated and consistent within the engineering team/IPT as well as across all other engineering teams/IPTs. Where decisions or compromises cannot be made within the engineering team/IPT, request a decision by a higher authority.

EM2: Design Integration Management Support

Perform system design reviews in the context of a total ship engineering approach. Review, analyze, make recommendations for the use of, and implement design budget controls. Review, analyze, and make recommendations for the use of, and implement design decision-making tools. Develop a Specifications package consistent with the intent of the Acquisition Strategy. Establish and maintain a Configuration Management Database. Review, analyze and track Contract Data Requirements List (CDRL) items.

EM3: Engineering Management Documentation Support

Draft and maintain the Ship Design Systems Engineering Management Plan (SEMP), Annual Execution Plan and Ship Design History. Develop a Modeling and Simulation support plan. Develop a Verification, Validation and Accreditation (VV&A) Plan. Review and modify ship program and project products for proper grammar, readability, and clarity. Perform all aspects of design related data management, including the identification of data items, acquisition, control, maintenance, and storage of data from preliminary design through construction and ship delivery. Provide technical writing assistance including preparation of Technical Reports and Annual Reports.

EM4: Business and Financial Management Support

Provide draft budget exhibits for all appropriation accounts, including RDT&E and SCN, for the annual FMB review, OSD review, and President's Budget congressional review. Provide a strategic budgeting Red Team, to review and prepare analysis reports of draft budget exhibits to reflect possible reaction of higher level comptroller officials and congressional staff members to the budget. Provide funds execution plans for anticipated obligations and expenditures for each appropriation account, for the life of the funds appropriated for each fiscal year, and update the plans to reflect the status of actual execution. In collaboration with participating managers, provide funds execution plans for anticipated obligations and expenditures for each component of cost in the Ship Project Directive work breakdown structure for each item of government furnished equipment over the entire duration of the life of the funds. Update the plans to reflect the status of actual execution. Provide funds execution information for inclusion in program briefings, reports, and correspondence to comptroller officials and congressional staff members.

EM5: Risk Management Support

Provide technical and engineering expertise to identify, analyze, mitigate, and track the program's

technical risks. Implement and execute the program's risk plan as it applies to technical risk. Provide technical risk assessments, analyses, metrics, and recommendations. Research technical risk lessons learned from other Ship Acquisition Programs, and select risk items that may be applicable to ship programs and other projects. Provide training for members of SDM teams on techniques available to control risk. Prepare information and summaries of technical risk management initiatives, plans and results for inclusion in briefings, status reports, and program milestone documentation for reviews by acquisition officials in the Navy Secretariat and the Office of the Secretary of Defense.

EM6: Management Operating System Support

Assist with the development, implementation, and execution of the NAVSEA/PEO Management Operating System, including, but not limited to: action item tracking and reporting, development and maintenance of the Master Design Schedule, and activity log and workload tracking and projections.

EM7: International Technical Exchange Program Management Support

Identify potential foreign programs and design efforts of beneficial interest to SEA 05 and ship programs. Work with, but not limited to, Navy International Programs Office, technical authorities, other DoD program offices, and foreign governmental officials to establish a sufficient set of agreements to permit the exchange of relevant data between ship and selected foreign programs and design efforts. Plan and facilitate meetings and conferences between SEA 05 and ship programs and selected foreign programs and design efforts. Track data requests and exchanges between SEA 05 and foreign programs and design efforts.

TECHNICAL STUDIES

TS1: Concept Studies

Perform engineering concept studies to develop and define new ship designs in support of the Joint Capabilities Integration and Develop System (JCIDS) [CJCS 3170], analysis of alternative efforts, technology assessment and needs identification, strategic studies and planning, force structure studies, naval wargaming, and emergent joint and naval capabilities requirements.

TS2: Future Force Formulation Studies

Develop force level concepts including ships, unmanned vehicles, and other force components. Performance warfare assessments and analysis of alternative future forces. Support war gaming on force level concepts.

TS3: Ship Design Tools, Processes, Practices, Criteria, Databases

Develop and upgrade computer tools that are used to do engineering analysis and other engineering efforts in support of ship design and naval engineering. Develop and upgrade ship design and engineering processes, practices and methods. Develop and upgrade engineering and design criteria for naval ship design. Develop and upgrade databases, web pages and other ship design and engineering repositories and references.

Collect existing information on design tool usage, standardization, data translation/exchange and usage of IDEs on Navy programs from various sources including recent studies, publications, key SEA 05 personnel with related responsibilities (current and former TWH for Product Data Integration and Exchange/Tools), etc.

Create list of issues related to standardization of design tools and approach that will impact the cost of the Future Fleet. Examples of areas to investigate include shortfalls in the areas of design tools, drawing manuals, training packages, vendor furnished information, and other tech documents/electronic reviews.

Provide alternatives for implementing standardized design tools and approaches that will improve the affordability of ship design and construction programs.

TS4: Human Systems Integration Engineering

Identify the minimum quantitative and qualitative manpower requirements essential to operation, maintenance, and support of the ship under given conditions of readiness with the goal of a manpower reduction in accordance with the CDD. Perform a Top-Down Functional Analysis for ship in conjunction with other IPTs, to support the total ship manpower assessment and provide analysis for HSI support and requirements definition and decomposition. Ensure that human factors and other HSI domains are integrated into the design at the earliest possible stages keeping shipboard workload reduction in focus. Review, revise, and recommend methods and rationale that identify military and civilian personnel with the skills and grades required to operate and maintain ship systems and

equipment. Provide technical analyses, reviews, studies, inputs and recommendations for the development of training documentation, processes and plans.

TS5: Integrated Logistics Support (ILS)

Draft and recommend technical ILS requirements in shipbuilding, systems production, and modernization throughout program life cycle.

Provide support in all areas of ILS for ships, ship systems and shipboard equipment and prepare supporting documentation. ILS is the composite of all support considerations necessary to assure the effective and economical support of a system or equipment for it programmed life cycle. Logistics elements include all requirements and resources necessary to operate and maintain the system or equipment at all levels of support (organizational, intermediate, and depot). Provide recommendations for spare parts based upon technical investigations of problems or identified maintenance issues. Provide technical analyses in support of logistics management, and perform reviews of technical manuals and other logistics documentation.

The elements to be addressed include:

Maintenance Planning;

Support and test equipment;

Supply Support;

Packaging, Handling, storage and transportation;

Technical Data (including drawings);

Technical publications;

Facilities;

Personnel and training.

TS6: Ship Conversion

Undertake ship conversion feasibility studies in support of emerging requirements. These studies shall be supported by cost and schedule estimates.

TS7: Red Team Reviews / Independent Review Panels / Audit Teams

Facilitate and provide required technical information/corporate memory expertise to IPTs, special advisory boards, offsites, working groups and audit teams.

TS8: Special Studies Engineering

Undertake special studies in support of emerging requirements or to address fleet technical issues.

TS9: Independent Cost Estimates and Schedules

Prepare independent cost estimates and schedules for system procurement or repair, life cycle, production, or other activities and provide recommendations on cost realism.

TECHNICAL LIBRARY MANAGEMENT

TL1: Design Histories

Maintain a complete electronic and hard copy design history including specifications; all technical issues studied and reported; correspondence tracking system, plans and schedules, technical presentations and briefings. Support maintenance of data and/or history on a Navy web site.

TL2: Design Databases

Manage and maintain database. Maintain document library in a searchable format. Library is to be updated and available to personnel at design site and NAVSEA technical codes. Provide technical direction/assistance to install library and search system onto local area network.

ON-SITE SUPPORT FOR CONTRACT DESIGN, DETAIL DESIGN, CONSTRUCTION AND POST-DELIVERY

PS1: On-Site Engineering Support

Provide on-site engineering, project management and technical support at shipbuilder’s facility, and repair facilities during detail design, construction and post-delivery.

PS2: On Site Test, Trials, Evaluation and Logistics Analysis Support

Provide on-site test, trials and logistics analysis support at shipbuilder’s facility during detail design, construction and post-delivery. Provide logistical analysis and support to SEA 05D for issues relevant to ships.

DESIGN SITES

DS1: Design Sites

Provide and maintain a suitable, co-located facility from which to conduct this work, within a 2-mile radius from the Washington Navy Yard, to support integrated design and engineering capability including accredited connectivity to the NAVSEA Zone 1 network infrastructure. This facility shall be capable of accommodating government personnel and contractor personnel numbers as needed to support the project or program. This facility shall house a technical library (digital and paper) of no less than 400 square feet. The design site shall contain conference and meeting facilities including a networked conference room with projection and VTC capability (including the ability to host a VTC with potentially 7 different locations with at least one site simultaneously displayed with a data presentation) capable of seating 40 people.
The design site shall have ready access to a networked
conference room with projection capability capable of seating 150 people. The design site shall contain a dedicated networked conference room with projection capability of seating up to 12 people. The facility shall provide all computer hardware and software required to support these task statements.

DS2: Design Site Information Technology and Network Support

Maintain information technology and network support to the design site. Provide NMCI compliant connectivity and necessary connection to shipbuilder/design agent design information infrastructure.

DS3: Integrated Digital Environment

The contractor shall develop and maintain an Integrated Digital Environment (IDE), which shall be accessible by ship design program/project stakeholders. The IDE shall provide the ability to electronically communicate and process information across the various ship design project activities, processes, and functions, including but not limited to the entry, movement, manipulation, configuration management, maintenance, and approval of data.

GENERAL DELIVERABLES:

Progress Reports:

A monthly progress report is due to the Task Order Manager that identifies authorized funding, current and cumulative expenditures, remaining funds and percentage of funds remaining, assigned tasks and percentage of completion for individual tasks.

Other progress reports/schedules/agendas/meeting minutes/studies as defined by individual task order or technical instruction based on a cost estimate.

Engineering Products Format:

Deliverables shall be in electronic MS-Office format, MS-Project, PDF or HTML formats. Design and engineering product models shall be in accordance with ISO 10303 Standard for the Exchange of Product model data (STEP) Application Protocols (APs):

SYSTEM LEVEL APs

AP 233 Systems engineering data representation

AP 239 Product lifecycle support

SHIP STRUCTURAL ENVELOPE APs

AP 215 Ship arrangement

AP 216:2003 Ship molded forms

AP 218 Ship structures

DISTRIBUTED SYSTEMS APs

AP 212:2001 Electrotechnical design and installation

AP 227 Plant Spatial Configuration (piping, HVAC, cable trays, simple mechanical systems

Material and Prototype Hardware--The contractor may be required to procure materials for construction/fabrication of feasibility models and mock ups, and materials in support of shipboard and laboratory testing. Prototype hardware items may be procured for the purposes of testing and validation of products vs. requirements. This may require technical assistance in procurement, in-process design reviews, hardware manufacturing progressing, trial installations, Technical Evaluation (TECHEVAL), Operational Evaluation (OPEVAL), and test results analyses. This contract is not to be construed as a hardware procurement. Material and hardware may be procured under this contract for prototype and demonstration shipboard installations.

SECURITY REQUIREMENTS

FACILITY:

PERSONNEL:

a. Personnel to be U.S. citizens (exceptions on a case-by-case basis).

NAVSEA CAAS Study Team Review of Task Order No. N00178-04-D-4061-EH04 – Determination: Labor -0%CAAS, 100% Non-CAAS. ODCs – 100% Non-CAAS.

Justification: On 26 September 2005, NAVSEA CAAS Study Team Chairman Mr. Dave Diamantopoulos reviewed the requirements addressed within the subject Task Order. During the review it was determined that the labor requirements addressed within the subject task order are 100% Non-CAAS per exemption 11 and identified within DOD Directive 4205.2 dated 10 February 1992 referenced within Title 10 U.S.C., Section 2212, that specifically exempts from the definition of CAAS,". Services (e.g., systems engineering and technical services) acquired by or for a program office to increase the design performance capabilities of existing or new systems

SECTION D PACKAGING AND MARKING

Packaging and marking shall be in accordance with Section D of the IDIQ contract.

All reports delivered by the Contractor to the Government under this contract shall prominently show on the cover of the report:

(1) name and business address of the Contractor

(2) contract number

(3) contract dollar amount

(4) whether the contract was competitively or non-competitively awarded

(5) sponsor:

_____
(Name of Individual Sponsor)

_____
(Name of Requiring Activity)

_____
(City and State)

SECTION E INSPECTION AND ACCEPTANCE

Inspection and Acceptance for all items shall be in accordance with Section E of the SEAPORT Multiple Award IDIQ contract.

SECTION F DELIVERABLES OR PERFORMANCE

CLIN - DELIVERIES OR PERFORMANCE

The periods of performance for the following firm items are from date of task order award through 12 months thereafter, estimated at:

1001AA	12/12/2008 - 12/11/2009
1001AB	12/12/2008 - 12/11/2009
1001AC	12/12/2008 - 12/11/2009
1001AD	12/12/2008 - 12/11/2009
1001AE	2/1/2009 - 3/31/2010
1001AF	2/1/2009 - 12/31/2009
1001AH	2/1/2009 - 12/31/2009
1001AJ	3/20/2009 - 3/31/2010
1001AK	3/20/2009 - 6/30/2009
1001AL	4/21/2009 - 9/30/2009
1001AM	2/10/2009 - 9/30/2009
1001AN	9/30/2009 - 9/30/2010
1001AP	9/30/2009 - 12/31/2009
1001AQ	5/15/2009 - 9/30/2009
1001AR	6/30/2009 - 12/31/2009
1001AS	6/30/2009 - 12/31/2009
1001AT	6/30/2009 - 12/31/2009
1001AU	6/30/2009 - 12/31/2009
1001AV	6/30/2009 - 12/31/2009
1001AY	8/1/2009 - 3/31/2010
1001AZ	8/1/2009 - 12/31/2009
1001BA	8/1/2009 - 12/31/2009
1001BB	7/13/2009 - 12/31/2009
1001BC	7/27/2009 - 12/31/2009
1001BD	8/1/2009 - 3/31/2010
1001BE	6/29/2009 - 12/31/2009
1001BF	9/12/2009 - 9/11/2010
1001BG	9/12/2009 - 9/11/2010
1001BH	9/12/2009 - 9/11/2010
1001BJ	9/8/2009 - 12/31/2009
1001BK	9/8/2009 - 12/31/2009
1001BL	9/8/2009 - 12/31/2009
1001BM	11/1/2009 - 12/16/2009
3001AA	12/12/2008 - 5/28/2009
3001AB	12/12/2008 - 5/28/2009
3001AD	12/12/2008 - 12/11/2009
3001AE	2/1/2009 - 3/31/2010
3001AF	2/1/2009 - 12/31/2009

3001AJ	3/20/2009 - 3/31/2010
3001AK	3/20/2009 - 6/30/2009
3001AL	4/21/2009 - 9/30/2009
3001AM	2/10/2009 - 9/30/2009
3001AN	9/30/2009 - 12/31/2010
3001AP	9/30/2009 - 12/31/2009
3001AQ	5/15/2009 - 9/30/2009
3001AS	6/30/2009 - 12/31/2009
3001AT	6/30/2009 - 12/31/2009
3001AU	6/30/2009 - 12/31/2009
3001AV	6/30/2009 - 12/31/2009
3001AZ	8/1/2009 - 3/31/2010
3001BA	8/1/2009 - 12/31/2009
3001BB	7/13/2009 - 12/31/2009
3001BD	8/1/2009 - 3/31/2010
3001BE	6/29/2009 - 12/31/2009
3001BG	9/12/2009 - 9/11/2010
3001BJ	9/8/2009 - 12/31/2009
3001BK	9/8/2009 - 12/31/2009
3001BL	9/8/2009 - 12/31/2009

The period of performance for the following option items are from date of option exercise through 12 months thereafter, estimated at:

4002AA	5/29/2009 - 5/28/2010
4002AB	5/29/2009 - 5/28/2010
6002AA	5/29/2009 - 5/28/2010
6002AB	5/29/2009 - 5/28/2010

The period of performance for the following award-term items are from date of option exercise through 12 months thereafter, estimated at:

4003AA	5/29/2010 - 5/28/2011
4003AB	5/29/2010 - 5/28/2011
4003AC	5/29/2010 - 5/28/2011
4003AD	5/29/2010 - 5/28/2011
4004AA	5/29/2011 - 5/28/2012
4004AB	5/29/2011 - 5/28/2012
4004AC	5/29/2011 - 5/28/2012
4004AD	5/29/2011 - 5/28/2012
4005AA	5/29/2012 - 5/28/2013

4005AB	5/29/2012 - 5/28/2013
4005AC	5/29/2012 - 5/28/2013
4005AD	5/29/2012 - 5/29/2013
6003AA	5/29/2010 - 5/28/2012
6003AB	5/29/2010 - 5/28/2011
6003AC	5/29/2010 - 5/28/2011
6003AD	5/29/2010 - 5/28/2011
6004AA	5/29/2011 - 5/28/2012
6004AB	5/29/2011 - 5/29/2012
6004AC	5/29/2011 - 5/28/2012
6004AD	5/29/2011 - 5/28/2012
6005AA	5/29/2012 - 5/28/2013
6005AB	5/29/2012 - 5/28/2013
6005AC	5/29/2012 - 5/28/2013
6005AD	5/29/2012 - 5/28/2013

Services to be performed hereunder will be provided primarily at the Washington Navy Yard, in the metropolitan District of Columbia area, and NAVSEA field activities, as well as ships at sea.

SECTION G CONTRACT ADMINISTRATION DATA

HQ G-2-0007 INVOICE INSTRUCTIONS (NAVSEA) (JAN 2008)

(a) In accordance with the clause of this contract entitled "ELECTRONIC SUBMISSION OF PAYMENT REQUESTS" (DFARS 252.232-7003), the Naval Sea Systems Command (NAVSEA) will utilize the DoD Wide Area Workflow Receipt and Acceptance (WAWF) system to accept

supplies/services delivered under this contract. This web-based system located at https://wawf.eb.mil provides the technology for government contractors and authorized Department of Defense (DoD) personnel to generate, capture and process receipt and payment-related documentation in a paperless environment. Invoices for supplies/services rendered under this contract shall be submitted electronically through WAWF. Submission of hard copy DD250/invoices may no longer be accepted for payment.

(b) It is recommended that the person in your company designated as the Central Contractor Registration (CCR) Electronic Business (EB) Point of Contact and anyone responsible for the submission of invoices, use the online training system for WAWF at http://wawftraining.com. The Vendor, Group Administrator (GAM), and sections marked with an asterisk in the training system should be reviewed. Vendor Quick Reference Guides also are available at http://acquisition.navy.mil/navyaos/content/view/full/3521/. The most useful guides are "Getting Started for Vendors" and "WAWF Vendor Guide".

(c) The designated CCR EB point of contact is responsible for activating the company's CAGE code on WAWF by calling 1-866-618-5988. Once the company is activated, the CCR EB point of contact will self-register under the company's CAGE code on WAWF and follow the instructions for a group administrator. After the company is set-up on WAWF, any additional persons responsible for submitting invoices must self-register under the company's CAGE code at https://wawf.eb.mil.

(d) The contractor shall use the following document types, DODAAC codes and inspection and acceptance locations when submitting invoices in WAWF:

Type of Document (*contracting officer check all that apply*)

☐ Invoice (FFP Supply & Service)

☐ Invoice and Receiving Report Combo (FFP Supply)

☐ Invoice as 2-in-1 (FFP Service Only)

☐ Cost Voucher (Cost Reimbursable, T&M , LH, or FPI)

☐ Receiving Report (FFP, DD250 Only)

-

DODAAC Codes and Inspection and Acceptance Locations (*contracting officer complete appropriate information as applicable*)

Issue DODAAC _____

Admin DODAAC _____

Pay Office DODAAC _____

Inspector DODAAC _____

Service Acceptor DODAAC _____

Service Approver DODAAC _____

Ship To DODAAC _____

DCAA Auditor DODAAC _____

LPO DODAAC _____

Inspection Location _____

Acceptance Location _____

Attachments created in any Microsoft Office product may be attached to the WAWF invoice, e.g., backup documentation, timesheets, etc. Maximum limit for size of each file is 2 megabytes. Maximum limit for size of files per invoice is 5 megabytes.

(e) Before closing out of an invoice session in WAWF, but after submitting the document(s), you will be prompted to send additional email notifications. Click on "Send More Email Notification" and add the acceptor/receiver email addresses noted below in the first email address block, and add any other additional email addresses desired in the following blocks. This additional notification to the government is important to ensure that the acceptor/receiver is aware that the invoice documents have been submitted into WAWF.

Send Additional Email Notification To:
ENTER THE EMAIL ADDRESS FOR THE TOM
_____

(f) The contractor shall submit invoices/cost vouchers for payment per contract terms and the government shall process invoices/cost vouchers for payment per contract terms. Contractors approved by DCAA for direct billing will submit cost vouchers directly to DFAS via WAWF. Final voucher submission will be approved by the ACO.

(g) The WAWF system has not yet been implemented on some Navy programs; therefore, upon written concurrence from the cognizant Procuring Contracting Officer, the Contractor is authorized to use DFAS's WInS for electronic end to end invoicing until the functionality of WInS has been incorporated into WAWF.

(h) If you have any questions regarding WAWF, please contact the WAWF helpdesk at the above 1-866 number or the NAVSEA WAWF point of contact Margaret Morgan at (202) 781-4815 or margaret.morgan@navy.mil.

(End of Text)

SECTION H SPECIAL CONTRACT REQUIREMENTS

5252.232-9104 ALLOTMENT OF FUNDS (MAY 1993)

(a) This contract is incrementally funded with respect to both cost and fee. The amount(s) presently available and allotted to this contract for payment of fee for incrementally funded contract line item number/contract subline item number (CLIN/SLIN), subject to the clause entitled "FIXED FEE" (FAR 52.216-8) or "INCENTIVE FEE" (FAR 52.216-10), as appropriate, is specified below. The amount(s) presently available and allotted to this contract for payment of cost for incrementally funded CLINs/SLINs is set forth below. As provided in the clause of this contract entitled "LIMITATION OF FUNDS" (FAR 52.232-22), the CLINs/SLINs covered thereby, and the period of performance for which it is estimated the allotted amount(s) will cover are as follows:

ESTIMATED ITEM(S)	ALLOTED TO COST	ALLOTTED TO FEE	PERIOD OF PERFORMANCE
	$	$	

(b) The parties contemplate that the Government will allot additional amounts to this contract from time to time for the incrementally funded CLINs/SLINs by unilateral contract modification, and any such modification shall state separately the amount(s) allotted for cost, the amount(s) allotted for fee, the CLINs/SLINs covered thereby, and the period of performance which the amount(s) are expected to cover.

(c) CLINs/SLINs 1001AB, 1001AC, 1001AD, 1001AE, 1001AF, 1001AH, 1001AJ, 1001AK, 1001AL, 1001AM, 1001AN, 1001AP, 1001AQ, 1001AR, 1001AS, 1001AT, 1001AU, 1001AV, 1001AY, 1001AZ, 1001BA, 1001BB, 1001BC, 1001BD, 1001BE, 1001BF, 1001BG, 1001BH, 1001BJ, 1001BK, 1001BL, 1001BM, 3001AB, 3001AD, 3001AE, 3001AF, 3001AJ, 3001AK 3001AL, 3001AM, 3001AN, 3001AP, 3001AQ, 3001AS, 3001AT, 3001AU, 3001AV, 3001AZ, 3001BA, 3001BB, 3001BD, 3001BE, 3001BG, 3001BJ, 3001BK, 3001L are fully funded and performance under these CLINs/SLINs is subject to the clause of this contract entitled "LIMITATION OF COST" (FAR 52.232-20) or "LIMITATION OF COST (FACILITIES)" (FAR 52.232-21), as applicable.

(d) The Contractor shall segregate costs for the performance of incrementally funded CLINs/SLINs from the costs of performance of fully funded CLINs/SLINs.

5252.216-9122 LEVEL OF EFFORT (DEC 2000)

(a) The Contractor agrees to provide the total level of effort specified in the next sentence in performance of the work described in Sections B and C of this contract. The total level of effort for the performance of this contract could be 4,250,000 total man-hours of direct labor, including subcontractor direct labor for those subcontractors specifically identified in the Contractor's proposal as having hours included in the proposed level of effort.

(b) Of the total man-hours of direct labor set forth above, it is estimated that **(Offeror to fill-in)** man-hours are uncompensated effort.

Uncompensated effort is defined as hours provided by personnel in excess of 40 hours per week without additional compensation for such excess work. All other effort is defined as compensated effort. If no effort is indicated in the first sentence of this paragraph, uncompensated effort performed by the Contractor shall not be counted in fulfillment of the level of effort obligations under this contract.

(c) Effort performed in fulfilling the total level of effort obligations specified above shall only include effort performed in direct support of this contract and shall not include time and effort expended on such things as local travel to and from an employee's usual work location, uncompensated effort while on travel status, truncated lunch periods, work (actual or inferred) at an employee's residence or other non-work locations (except as provided in paragraph (j) below), or other time and effort which does not have a specific and direct contribution to the tasks described in Sections B and C.

(d) The level of effort shall be expended at an average rate of approximately 9,615 man-hours per week (500,000 man-hours / 52 weeks year). It is understood and agreed that the rate of man-hours per month may fluctuate in pursuit of the technical objective, provided such fluctuation does not result in the use of the total man-hours of effort prior to the expiration of the term hereof, except as provided in the following paragraph.

(e) If, during the term hereof, the Contractor finds it necessary to accelerate the expenditure of direct labor to such an extent that the total man-hours of effort specified above would be used prior to the expiration of the term, the Contractor shall notify the Contracting Officer in writing setting forth the acceleration required, the probable benefits which would result, and an offer to undertake the acceleration at no increase in the estimated cost or fee together with an offer, setting forth a proposed level of effort, cost breakdown, and proposed fee, for continuation of the work until expiration of the term hereof. The offer shall provide that the work proposed will be subject to the terms and conditions of this contract and any additions or changes required by then current law, regulations, or directives, and that the offer, with a written notice of acceptance by the Contracting Officer, shall constitute a binding contract. The Contractor shall not accelerate any effort until receipt of such written approval by the Contracting Officer. Any agreement to accelerate will be formalized by contract modification.

(f) The Contracting Officer may, by written order, direct the Contractor to accelerate the expenditure of direct labor such that the total man-hours of effort specified in paragraph (a) above would be used prior to the expiration of the term. This order shall specify the acceleration required and the resulting revised term. The Contractor shall acknowledge this order within five days of receipt.

(g) If the total level of effort specified in paragraph (a) above is not provided by the Contractor during the period of this contract, the Contracting Officer, at its sole discretion, shall either (i) reduce the fee of this contract as follows:

$$\text{Fee Reduction} = \text{Fee}\left(\frac{\text{Required LOE} - \text{Expended LOE}}{\text{Required LOE}}\right)$$

or (ii) subject to the provisions of the clause of this contract entitled "LIMITATION OF COST" (FAR 52.232-20) or "LIMITATION OF COST (FACILITIES)" (FAR 52.232-21), as applicable, require the Contractor to continue to perform the work until the total number of man-hours of direct labor specified in paragraph (a) above shall have been expended, at no increase in the fee of this contract.

(h) The Contractor shall provide and maintain an accounting system, acceptable to the Administrative Contracting Officer and the Defense Contract Audit Agency (DCAA), which collects costs incurred and effort (compensated and uncompensated, if any) provided in fulfillment of the level of effort obligations of this contract. The Contractor shall indicate on each invoice the total level of effort claimed during the period covered by the invoice, separately identifying compensated effort and uncompensated effort, if any.

(i) Within 45 days after completion of the work under each separately identified period of performance hereunder, the Contractor shall submit the following information in writing to the Contracting Officer with copies to the cognizant Contract Administration Office and to the DCAA office to which vouchers are submitted: (1) the total number of man-hours of direct labor expended during the applicable period; (2) a breakdown of this total showing the number of man-hours expended in each direct labor classification and associated direct and indirect costs; (3) a breakdown of other costs incurred; and (4) the Contractor's estimate of the total allowable cost incurred under the contract for the period. Within 45 days after completion of the work under the contract, the Contractor shall submit, in addition, in the case of a cost underrun; (5) the amount by which the estimated cost of this contract may be reduced to recover excess funds and, in the case of an underrun in hours specified as the total level of effort; and (6) a calculation of the appropriate fee reduction in accordance with this clause. All submissions shall include subcontractor information.

(j) Unless the Contracting Officer determines that alternative worksite arrangements are detrimental to contract performance, the Contractor may perform up to 10% of the hours at an alternative worksite, provided the Contractor has a company-approved alternative worksite plan. The primary worksite is the traditional “main office” worksite. An alternative worksite means an employee’s residence or a telecommuting center. A telecommuting center is a geographically convenient office setting as an alternative to an employee’s main office. The Government reserves the right to review the Contractor’s alternative worksite plan. In the event performance becomes unacceptable, the Contractor will be prohibited from counting the hours performed at the alternative worksite in fulfilling the total level of effort obligations of the contract. Regardless of work location, all contract terms and conditions, including security requirements and labor laws, remain in effect. The Government shall not incur any additional cost nor provide

additional equipment for contract performance as a result of the Contractor's election to implement an alternative worksite plan.

(k) Notwithstanding any of the provisions in the above paragraphs, the Contractor may furnish man-hours up to five percent in excess of the total man-hours specified in paragraph (a) above, provided that the additional effort is furnished within the term hereof, and provided further that no increase in the estimated cost or fee is required.

Note:: The total estimated level of effort of 4,250,000 man-hours of direct labor specified in paragraph (a) above represents the **maximum** possible direct labor required under task order. The average burn rate of 9,615 man-hours specified in paragraph (d) above represents the **anticipated** average expenditure of hours per week.

5252.242-9115 TECHNICAL INSTRUCTIONS (APR 1999)

(a) Performance of the work hereunder may be subject to written technical instructions signed by the Contracting Officer's Representative specified in Section G of this contract. As used herein, technical instructions are defined to include the following:

(1) Directions to the Contractor which suggest pursuit of certain lines of inquiry, shift work emphasis, fill in details or otherwise serve to accomplish the contractual statement of work.

(2) Guidelines to the Contractor which assist in the interpretation of drawings, specifications or technical portions of work description.

(b) Technical instructions must be within the general scope of work stated in the contract. Technical instructions may not be used to: (1) assign additional work under the contract; (2) direct a change as defined in the "CHANGES" clause of this contract; (3) increase or decrease the contract price or estimated contract amount (including fee), as applicable, the level of effort, or the time required for contract performance; or (4) change any of the terms, conditions or specifications of the contract.

(c) If, in the opinion of the Contractor, any technical instruction calls for effort outside the scope of the contract or is inconsistent with this requirement, the Contractor shall notify the Contracting Officer in writing within ten (10) working days after the receipt of any such instruction. The Contractor shall not proceed with the work affected by the technical instruction unless and until the Contractor is notified by the Contracting Officer that the technical instruction is within the scope of this contract.

(d) Nothing in the foregoing paragraph shall be construed to excuse the Contractor from performing that portion of the contractual work statement which is not affected by the disputed technical instruction.

ORGANIZATIONAL CONFLICT OF INTEREST (NAVSEA) (JUL 2000) (RESTATED FROM BASIC CONTRACT)

(a) "Organizational Conflict of Interest" means that because of other activities or relationships with other persons, a person is unable or potentially unable to render impartial assistance or advice to the Government, or the person's objectivity in performing the contract work is or might be otherwise impaired, or a person has an unfair competitive advantage. "Person" as used herein includes Corporations, Partnerships, Joint Ventures, and other business enterprises.

(b) The Contractor warrants that to the best of its knowledge and belief, and except as otherwise set forth in the contract, the Contractor does not have any organizational conflict of interest(s) as defined in paragraph (a).

(c) It is recognized that the effort to be performed by the Contractor under this contract may create a potential organizational conflict of interest on the instant contract or on a future acquisition. In order to avoid this potential conflict of interest, and at the same time to avoid prejudicing the best interest of the Government, the right of the Contractor to participate in future procurement of equipment and/or services that are the subject of any work under this contract shall be limited as described below in accordance with the requirements of FAR 9.5.

(d) (1) The Contractor agrees that it shall not release, disclose, or use in any way that would permit or result in disclosure to any party outside the Government any information provided to the Contractor by the Government

during or as a result of performance of this contract. Such information includes, but is not limited to, information submitted to the Government on a confidential basis by other persons. Further, the prohibition against release of Government provided information extends to cover such information whether or not in its original form, e.g., where the information has been included in Contractor generated work or where it is discernible from materials incorporating or based upon such information. This prohibition shall not expire after a given period of time.

(2) The Contractor agrees that it shall not release, disclose, or use in any way that would permit or result in disclosure to any party outside the Government any information generated or derived during or as a result of performance of this contract. This prohibition shall expire after a period of three years after completion of performance of this contract.

(3) The prohibitions contained in subparagraphs (d)(1) and (d)(2) shall apply with equal force to any affiliate of the Contractor, any subcontractor, consultant, or employee of the Contractor, any joint venture involving the Contractor, any entity into or with which it may merge or affiliate, or any successor or assign of the Contractor. The terms of paragraph (f) of this Special Contract Requirement relating to notification shall apply to any release of information in contravention of this paragraph (d).

(e) The Contractor further agrees that, during the performance of this contract and for a period of three years after completion of performance of this contract, the Contractor, any affiliate of the Contractor, any subcontractor, consultant, or employee of the Contractor, any joint venture involving the Contractor, any entity into or with which it may subsequently merge or affiliate, or any other successor or assign of the Contractor, shall not furnish to the United States Government, either as a prime contractor or as a subcontractor, or as a consultant to a prime contractor or subcontractor, any system, component or services which is the subject of the work to be performed under this contract. This exclusion does not apply to any recompetition for those systems, components or services furnished pursuant to this contract. As provided in FAR 9.505-2, if the Government procures the system, component, or services on the basis of work statements growing out of the effort performed under this contract, from a source other than the contractor, subcontractor, affiliate, or assign of either, during the course of performance of this contract or before the three year period following completion of this contract has lapsed, the Contractor may, with the authorization of the SeaPort/Task Order Contracting Officer, participate in a subsequent procurement for the same system, component, or service. In other words, the Contractor may be authorized to compete for procurement(s) for systems, components or services subsequent to an intervening procurement.

(f) The Contractor agrees that, if after award, it discovers an actual or potential organizational conflict of interest, it shall make immediate and full disclosure in writing to the SeaPort/Task Order Contracting Officer. The notification shall include a description of the actual or potential organizational conflict of interest, a description of the action which the Contractor has taken or proposes to take to avoid, mitigate, or neutralize the conflict, and any other relevant information that would assist the SeaPort/Task Order Contracting Officer in making a determination on this matter. Notwithstanding this notification, the Government may terminate the contract/Task Orders for the convenience of the Government if determined to be in the best interest of the Government.

(g) Notwithstanding paragraph (f) above, if the Contractor was aware, or should have been aware, of an organizational conflict of interest prior to the award of this contract or becomes, or should become, aware of an organizational conflict of interest after award of this contract and does not make an immediate and full disclosure in writing to the SeaPort/Task Order Contracting Officer, the Government may terminate this contract/task orders for default.

(h) If the Contractor takes any action prohibited by this requirement or fails to take action required by this requirement, the Government may terminate this contract for default.

(i) The SeaPort/Task Order’s Contracting Officer's decision as to the existence or nonexistence of an actual or potential organizational conflict of interest shall be final.

(j) Nothing in this requirement is intended to prohibit or preclude the Contractor from marketing or selling to the United States Government its product lines in existence on the effective date of this contract; nor, shall this requirement preclude the Contractor from participating in any research and development or delivering any design development model or prototype of any such equipment. Additionally, sale of catalog or standard commercial items are exempt from this requirement.

(k) The Contractor shall promptly notify the Contracting Officer, in writing, if it has been tasked to evaluate or advise the Government concerning its own products or activities or those of a competitor in order to ensure proper

safeguards exist to guarantee objectivity and to protect the Government's interest.

(l) The Contractor shall include this requirement in subcontracts of any tier which involve access to information or situations/conditions covered by the preceding paragraphs, substituting "subcontractor" for "contractor" where appropriate.

(m) The rights and remedies described herein shall not be exclusive and are in addition to other rights and remedies provided by law or elsewhere included in the basic contract or this task order.

(n) Compliance with this requirement is a material requirement of the basic contract and this task order.

AWARD TERM CLAUSE

(a) Maximum Period of Performance

The initial Task Order period of performance may be extended through the exercise of up to one option year and three award term years (years 2 through 5), as provided for in the Section I clause of this Task Order entitled OPTION TO EXTEND THE PERIOD OF PERFORMANCE and the Award Term provisions defined herein. These additional “award term” or “option” periods will be awarded by the Government based on contractor performance as determined by the Government in accordance with this clause.

(b) Monitoring Performance

Contractor performance will be monitored by the Government. A panel hereinafter referred to as the Award Term Review Board or ATRB will be responsible for monitoring and will make recommendations to the Term Determining Official (TDO). The ATRB may accept monitoring input from any source it chooses. The ATRB may be changed at any time at the discretion of the TDO. Notice of such change will be provided to the contractor.

The ATRB will report its findings and recommendations to a TDO. The TDO will make the final decision on whether the contractor’s performance during the evaluation period is sufficient to earn the contractor an award term or to retain an already earned term.

The TDO shall be SEA05B or his designee.

(c) Award Term Evaluation Periods

Each year of performance shall be an evaluation period. Each of the first four years shall be evaluated to determine whether the contractor earns an award term. Years two through four will be evaluated to determine whether the contractor has retained award terms already earned.

The Government will conduct an *interim* evaluation at approximately the half-way point of each evaluation period. These interim evaluations are intended to provide the contractor with the

Government's assessment of the contractor's performance through the first half of each award term evaluation period.

A *final* evaluation will occur on an annual basis. The final evaluation will consider all effort that has occurred during the evaluation period. Only the final evaluation will be used as a basis for the award term decision.

(d) Self-Evaluation

The Contractor shall submit to the PCO within fourteen working days after the end of each final evaluation period a written self-evaluation of its performance for that period. The written self-evaluation may contain any information that may be reasonably expected to assist the ATRB in evaluating the Contractor's performance. This self-evaluation will be considered in the ATRB's evaluation of the Contractor's performance.

(e) Award Term Procedures

After the conclusion of an evaluation period, the ATRB will meet to evaluate the Contractor's performance, including the Contractor's self-evaluation. The Contractor may be invited to present information in addition to that contained in the self-evaluation to assist in the ATRB's evaluation. The criteria to be considered in the evaluation are set forth elsewhere in this Award Term clause.

A numerical score, on a scale of 0-100, will be determined for each of the evaluation criterion. The numerical weights for each evaluation criterion will be applied to the score. The weighted criteria scores will be summed to arrive at a total, weighted evaluation score. This score, along with any supporting narrative that may be prepared by the ATRB, will be provided to the TDO. The TDO will determine the final award term rating for an evaluation period. The Contracting Officer will inform the Contractor of the award term rating in a letter to the Contractor.

(f) Retention

Award Term and Ceiling allocation will be determined in accordance with the Award Term Plan.

(g) Finality of Decisions

Award Term decisions are at the sole discretion of the TDO. All decisions rendered by the TDO are final. The phrase "award term decision" refers to both the decision by the TDO whether the Contractor has earned an award term and the decision by the TDO whether the Contractor has retained an award term already earned. An award term decision is made at the sole discretion of the TDO.

(h) Fair and Reasonable Price A Necessary Condition

The Contracting Officer must determine that the price set forth in the Task Order for the services covered by the Task Order continues to be fair and reasonable for a given award term period. Such a decision is at the sole discretion of the PCO. A decision that the price is no longer fair and reasonable will result in the Government voiding any award terms earned. A determination regarding whether there is a continued need for the same goods or services may be made at any time.

(i) Option Exercise A Necessary Condition

If at any time the Government does not exercise an option, any previously awarded award term(s) shall be void.

(j) Retention of Award Terms A Necessary Condition

If at any time the Contractor has not retained an award term already earned, any subsequent terms shall be void.

(k) Continued Funds A Necessary Condition

The PCO must make a determination that sufficient funds are available before an award term that has been earned and retained may be become effective. The determination that sufficient funds are available does not constitute a finding that funds equal to the full total estimated cost of performance for a given year are available. Award term periods may be incrementally funded. In the event of incremental funding, the clause entitled LIMITATION OF FUNDS (FAR 52.232-22 (April 1984) shall apply.

The decision that sufficient funds are available is at the sole discretion of the PCO. Resources available to the program manager are subject to the managerial discretion of a program manager and a decision that sufficient funds are not available for this contract may be made even if there are funds available to the program office. A determination regarding the availability of funds may be made at any time.

(l) Continued Requirement A Necessary Condition

The Contracting Officer must determine that a continued need for the same services covered by this Task Order exists for a given award term period. Such a decision is at the sole discretion of the Contracting Officer. A decision that the requirement has changed or that a requirement for the same goods or services no longer exists will result in the Government voiding any award terms earned. A determination regarding whether there is a continued need for the same services may be made at any time.

(m) Failure to Retain Earned Award Terms Not a Termination

If at any time the Government does not authorize performance of a previously earned award term, the subsequent terms shall be considered void. The Contractor shall not be entitled to any costs arising out of or related to those award terms that are made void by virtue of the operation of this clause. An award term decision that an earned award term has not been retained is not a termination for convenience. A decision by the PCO that any of the necessary conditions of this clause have not been satisfied is not a termination for convenience. For example, if the Contractor has earned three award terms but the Government fails to exercise the option for the fifth year of the contract, then the contract shall end at the completion of the period of performance for the fourth year.

(n) Contractor Right to Decline

The contractor retains the right to decline any award term earned, even after award and/or retention, *prior to* 15 months before the start of an award term year. The Contractor must notify the PCO in writing prior to 15 months before the start of the award term year of its desire not to perform the next award term year. Failure to so notify the PCO may result in a default termination if the Contractor fails

to perform an award term that the Government has authorized. In the event the Contractor elects its rights to decline an earned award term, all award terms shall be void.

(o) Extension of the Task Order

The PCO will unilaterally modify the contract to extend the period of performance in one-year increments when each of the following conditions apply:

- an award term earned has been retained;
- the Government has a continuing requirement for the service(s) covered;
- the price established for the covered line items remains fair and reasonable;
- appropriated funds are available;
- the Contractor has not expressly stated in writing that it is unwilling to perform an award term no later than fifteen months before the beginning of an award term period.

(p) Evaluation Criteria

Following each evaluation period, the Contractor’s performance will be evaluated in accordance with the following award term plan.

AWARD TERM PLAN

1.0 INTRODUCTION

This is the basis for evaluation of the contractor's performance and for presenting an assessment of that performance to the term-determining official (TDO). The evaluation for the number of term points to be awarded will begin at the start of the Task Order.

Award-term contracting is effective when performance metrics are objective, a long-term business relationship is of value to the government and to the contractor, and the expected outcomes are known up-front. The specific criteria and procedures used for assessing the contractor's performance and for determining the award term earned are described herein. All TDO decisions regarding the award-term points—including, but not limited to, the number of points, if any; the methodology used to calculate the points; the calculation of the points; the contractor's entitlement to the points: and the nature and success of the contractor's performance—are final and not subject to dispute.

The award term will be provided to the supplier through unilateral task order modifications based upon points earned as determined by the TDO.

2.0 ORGANIZATION

The award-term organization includes the TDO and an Award-Term Review Board (ATRB) consisting of a chairperson, the contracting officer, a recorder, other functional area participants, advisory members, and the performance monitors.

3.0 RESPONSIBILITIES

a. Term-Determining Official. The TDO approves the award-term plan and any significant changes to it.

The TDO reviews the recommendations of the ATRB, considers all pertinent data, and determines the earned award-term points for each evaluation period. The TDO appoints the ATRB chairperson.

b. Award-Term Review Board Chairperson. The ATRB chairperson chairs the meetings of the ATRB and appoints the non-mandatory members of the board and the performance monitors. The ATRB chairperson briefs the TDO on recommended earned term amounts and the contractor's overall performance and recommends award-term plan changes to the TDO.

c. Award-Term Review Board. ATRB members review performance monitors' evaluation of the contractor's performance, consider all information from pertinent sources and arrive at the earned award-term points recommendation to be presented to the TDO. The ATRB will also recommend changes to this plan. An assessment of the contractor's performance will be done on a yearly basis, starting with the completion of the Base Period of this task order.

d. ATRB Recorder. The ATRB recorder is responsible for coordinating the administrative actions required by the performance monitors, the ATRB, and the TDO.

e. Contracting Officer (CO). The CO is the liaison between contractor and government personnel. Subsequent to the TDO decision, the CO evaluates the award-term points available and modifies the Task Order period of performance, if necessary, to reflect the decision.

f. Performance Monitors. Performance monitors maintain written records of the contractor's performance in their assigned evaluation areas so that a fair and accurate evaluation is obtained.

4.0 AWARD-TERM PROCESSES

a. Available Award-Term Points. The earned award-term points will be based on the contractor's performance during each evaluation period. The available points for each evaluation period are shown in Annex 2.

b. Evaluation Criteria. If the CO does not give specific notice in writing to the contractor of any change to the evaluation criteria prior to the start of a new evaluation period, then the same criteria listed for the preceding period will be used in the following award-term evaluation period. Modifications to the plan shall take effect in the next evaluation period.

c. End-of-Period Evaluations. The ATRB recorder notifies ATRB members and performance monitors 14 calendar days before the end of the evaluation period. The contractor presents its self-assessment to the CO within 30 calendar days after the end of the evaluation period. This written assessment of the contractor's performance throughout the evaluation period may also contain any information that could be reasonably expected to assist the ATRB in evaluating its performance. The self-assessment may not exceed 20 pages. Performance monitors submit their evaluation reports to the ATRB within 30 calendar days after the end of the evaluation period. Copies shall be provided to the contractor; the contractor is then given an opportunity to address the performance monitor evaluations. The ATRB prepares its evaluation report and recommendation regarding earned or unearned award-term points. The ATRB briefs the evaluation report, and recommendation to the TDO within 60 calendar days after the end of the evaluation period. The TDO determines the overall award-term points for the evaluation period within 90 calendar days after each evaluation period. The TDO letter informs the contractor of the earned award-term points. Upon the award of sufficient award term-points, the CO issues a contract

modification within 15 calendar days after the TDO's decision is made authorizing an award extension or reduction based on the earned or unearned award-term points.

5.0 AWARD-TERM PLAN CHANGE PROCEDURE

The TDO may unilaterally change this plan prior to the beginning of an evaluation period. In addition, the contractor may recommend changes to the plan no later than 30 days prior to the beginning of the new evalution period. The contractor will be notified of changes to the plan by a modification to the task order, before the start of the affected evaluation period. Changes to this plan that are applicable to a current evaluation period will be incorporated by the mutual consent of both parties.

ANNEX 1

AWARD TERM ORGANIZATION

Term Determining Official:	SEA 05B
Award Term Review Board Chairperson:	SEA 05 personnel
Award Term Review Board Members:	
Member(s)	SEA 05 personnel
Contracting Officer	SEA 0265 or representative
Recorder	SEA 05 personnel

Area of Evaluation Performance Monitor(s)	
Technical Excellence and Timeliness	SEA 05 personnel
Cost Performance	SEA 05 personnel
Management/ Business Practices/ Small Bus.	SEA 05 personnel

The Government reserves the right to make substitutes for award term organization members and performance monitors.

ANNEX 2

AWARD TERM ALLOCATION BY EVALUATION PERIODS

The award term earned by the contractor will be determined at the completion of evaluation periods shown below. The award term points shown corresponding to each period are the maximum available award term amount that can be earned during that particular period.

Evaluation Period	From	To	Available Award Term Points
FIRST	Task Order Award	12 months thereafter	100
SECOND	Exercise of Option 1	12 months thereafter	100
THIRD	Exercise of Award Term 1	12 months thereafter	100

A score of 81 or more award term points in an evaluation period = 1 award term option, with possibility of additional ceiling

A score of 61 to 80 award term points = 1 award term option, with no additional ceiling

A score of 41 to 60 award term points = 1 award term option award, with loss of one half of award term ceiling

A score of 40 or below in an evaluation period = no award term period extension and loss of half of any previously awarded term extensions

OVERALL GRADE DEFINITIONS AND CORRESPONDING AWARD TERM POINTS:

Unsatisfactory Performance: Contractor's performance of most contract tasks is inadequate and inconsistent. Quality, responsiveness, and timeliness in many areas require attention and action. Corrective actions have not been taken or are ineffective. Award Term Points: 0 – 40

Marginal Performance: Special initiatives or innovation add value to the government, raising score of an otherwise unsatisfactory performance to marginal. Conversely, exceptionally poor performance in any given area may render an otherwise satisfactory performance marginal. Award Term Points: 41-60

Satisfactory Performance: Contractor's performance of most contract tasks is adequate with tangible and intangible benefits to the Government. Most areas of performance are adequate; these are more or less offset by lower-rated performance in other areas. Award Term Points: 61-80

Excellent Performance: Contractor's performance of virtually all contract tasks is consistently noteworthy and provides numerous significant, tangible or intangible, benefits to the Government (e.g., improved quality, responsiveness, increased timeliness, or generally enhanced effectiveness of operations). The few areas for improvement are all minor. There are no recurring problems. Contractor's management initiates effective corrective action whenever needed. Award Term Points: 81-100

ANNEX 3

EVALUATION CRITERIA

Technical & Schedule Excellence: 50% of Total

Cost Performance: 20% of Total

Management and Business Process and Small Business Participation 30% of Total

ANNEX 4

CONTRACTOR SELF-ASSESSMENT REPORTING

The following metrics will be provided as part of the contractor prepared self assessment for each End-of-Period Evaluation.

Average Labor Rate Delivered: This is to be calculated as the total hours delivered divided into the total Cost Plus Fixed Fee for labor (CLINS 0001 & 0004) as reflected in the contractor's invoices for the period evaluated.

Invoice History: Provide, for each invoice submitted during the period evaluated:

a) Date of Invoice.

b) Period Covered.

c) Current period cost and fee booked in the contractor's accounting system.

d) Cumulative contract to date cost and fee booked in the contractor's accounting system.

e) Amount of current period cost and fee invoiced.

f) Cumulative contract to date cost and fee invoiced.

g) Estimated cost and fee incurred for the current period.

h) Estimated cost and fee incurred for the contract to date.

i) Analysis of variance between incurred, booked, and invoiced amounts.

Subcontractor Payments: Provide the following information for the period evaluated:

a) Number of subcontractor invoices received

b) Number of subcontractor invoices rejected at least once.

c) Average time to complete payment for a valid invoice

d) Number of invoices paid within subcontract terms

e) Number of invoices paid in excess of subcontract terms

f) For e), the average and maximum days late

Small Business Subcontractor Utilization: Provide the most recently submitted SF294 data on task order subcontracting performance. If the most recent report predates the end of the period evaluated by more than 3 calendar months, provide an update as of the end of the evaluated period. In each case provide additional data quantifying the utilization of large, small, and the various special classes of small business as a percentage of the cost and fee invoiced for the period reported and cumulatively for the contract to date.

ANNEX 5

SEQUENCE OF EVENTS - AWARD TERM PROCESS

End-of-Period (EOP) Evaluations: End-of-Period Evaluations shall be provided at the end of the Base task order period and at the end of Option Period 1 and Award Term Period 1.

SCHEDULE	EVENT
14 days prior to EOP	Recorder notifies each ATRB member and performance monitor.
30 days after EOP	Performance Monitors submit evaluation reports to ATRB. ATRB forwards a copy to Contractor.
30 days after EOP	Contractor submits self-assessment to CO. Copy will be forwarded to ATRB.
60 days after EOP	ATRB briefs evaluation report and recommendation to the TDO.

	Contractor has opportunity to brief TDO.
90 days after EOP	TDO informs contractor and CO of the earned award term points.
15 days after TDO's decision	CO issues a contract modification reflecting award term extension, if earned.

SECTION I CONTRACT CLAUSES

In accordance with those contained in the Seaport E Multiple Award Contract (MAC) .

52.217-9 OPTION TO EXTEND THE TERM OF THE CONTRACT (MAR 2000)

(NAVSEA VARIATION) (MAR 2000)

(a) The Government may extend the term of this contract by written notice(s) to the Contractor within the periods specified below. If more than one option exists, each option is independent of any other option, and the Government has the right to unilaterally exercise any such option whether or not it has exercised other options.

Item	Option Item(s)	Latest Exercise Date
4002AA	12	MATOA
4002AB	12	MATOA
6002AA	12	MATOA
6002AB	12	MATOA

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any option(s) under this clause, shall not exceed five (5) years, however, in accordance with paragraph (g) of the requirement of this contract entitled "LEVEL OF EFFORT" (NAVSEA 5252.216-9122), if the total manhours delineated in paragraph (a) of the LEVEL OF EFFORT requirement, have not been expended within the period specified above, the Government may require the Contractor to continue to perform the work until the total number of manhours specified in paragraph (a)of the aforementioned requirement have been expended.

SECTION J LIST OF ATTACHMENTS

Attachment 1: Cost Summary Format

Attachment 2: Supporting Cost Info.

Attachment 3: Key Personnel Matrix

Attachment 4: Resume Attachment Format

Attachment 5: Previous Contracting Efforts

Attachment 6: Past Performance Questionnaire

Attachment 7: Department of Defense Contract Security Classification Specification DD Form 254

Attachment 8: Financial Accounting Data Sheets for modification 02

Attachment 9: Financial Accounting Data Sheets for modification 04

Attachment 10: Financial Accounting Data Sheets for modification 05

Attachment 11: Financial Accounting Data Sheets for modification 06

Attachment 12: Financial Accounting Data Sheet for modification 07

Attachment 13: Financial Accounting Data Sheets for modification 08

Attachment 14: Financial Accounting Data Sheets for modification 10