

STATEMENT OF WORK  
FOR  
CONSTRUCTION  
MARITIME SECURITY CUTTER MEDIUM (WMSM)  
OFFSHORE PATROL CUTTER (OPC)

DRAFT

PREPARED BY  
U.S. COAST GUARD  
OFFSHORE PATROL CUTTER PROJECT  
14 MARCH 2012

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**STATEMENT OF WORK FOR CONSTRUCTION****1.0 SCOPE**

- 1.1. This Statement of Work describes the requirements for the Construction period of the U.S. Coast Guard's (USCG) Offshore Patrol Cutter(s) (OPC). This SOW supplements the OPC General SOW, which is in Section C of the contract.
- 1.2. The objectives of the Construction period are:
  - 1.2.1 Transitioning the Detail Design into a product that when delivered satisfies the requirements of the contract.
  - 1.2.2 Installing and integrating the Government Furnished Equipment (GFE).
  - 1.2.3 Conducting the required shipboard tests and trials.

**2.0 REFERENCES AND DEFINITION**

- 2.1 Refer to Attachment J-X for references.
- 2.2 Refer to Attachment J-Y for definitions.

**3.0 REQUIREMENTS**

- 3.1 General. The Contractor shall construct the OPC in accordance with the OPC System Specification. Construction shall comprise the total effort of building, testing and outfitting the ship, including any efforts incidental to the construction effort.

**042 General Administrative Requirements**

- 042.1 Major Review Plans and Presentations. The Contractor shall provide Major Review Plans and Presentations. [042-04-1009]
- 042.2 Integrated Baseline Review. The Contractor shall conduct the Integrated Baseline Review (IBR) in conjunction with the option exercise for Construction.

**045 Care of Ship During Construction**

- 045.1 Care of Ship. The Contractor shall provide care and protection of the ship, material (including long lead time material), machinery, equipment and spares during the period of performance.

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- 045.1.1 The Contractor shall protect the ship, material, machinery and equipment (Contractor Furnished Equipment (CFE) and GFE) and spares from loss or damage at the Contractor's facility,
- 045.1.2 The Contractor shall maintain the ship, its systems, material, and spares in an undamaged condition.
- 045.2 Organization and procedures. The Contractor shall review the organization and procedures monthly during construction to ensure that they are sufficient to safeguard the ship at its extent of construction.
- 045.3 Care of Ship Support. The Contractor shall provide systems, equipment and material to support Care of Ship during Construction.
- 045.4 Damage Incident Reports. The Contractor shall provide Care of Ship - Damage Incident Reports to report incidents and actions taken to respond to collision or grounding, loss or damage to the ship, material, machinery and equipment (CFE or GFE), or spares while in the Contractor's care. [045-04-1078]
- 045.5 Care of Ship Report. The Contractor shall provide a Care of Ship Report to document machinery and equipment operation and maintenance, the results of fire and flooding protection drills and completion of actions taken in response to the findings of the drills. [045-04-2215]
- 045.6 Corrosion prevention. The Contractor shall provide corrosion prevention and cathodic protection for the ship.
- 045.6.1 The Contractor shall provide continuous cathodic protection while the ship is waterborne.
- 045.7 Ship Maintenance. The Contractor shall maintain the ship and adjacent areas in a neat, orderly and trash-free condition.
- 045.7.1 For trash disposal purposes, adjacent areas are any areas that are in close enough proximity to pose a danger to the ship.
- 045.7.2 The Contractor shall remove trash daily.
- 045.8 Protection from vermin. The Contractor shall provide protection from vermin during construction.
- 045.8.1 The Contractor shall thoroughly examine and rid items of vermin before being placed on board the ship.
- 045.8.2 The Contractor shall conduct periodic inspections of construction details and progress to ensure compliance with rat proofing requirements and the shipyard's Booklet of Standard Details for Ratproofing.

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- 045.8.3 The Contractor shall install rat guards as soon as the ship is water borne until delivery.
- 045.9 Certified Safe Building and Launching Facility. The Contractor shall provide and maintain a Certified Safe Building and Launching Facility.
- 045.9.1 The Contractor shall provide adequate building, launching, docking and undocking facilities for construction of the ship and execution of the Build Strategy.
- 045.9.2 The Contractor shall provide documentation of a valid Safety Certification for Drydock Facilities and Building Way in accordance with MIL-STD-1625, or in accordance with CG SFLC STD SPEC 8634. [045-04-2252]
- 045.10 Launch Readiness Review (LRR). The Contractor shall conduct a Launch Readiness Review (LRR) at the Contractor's facility. It shall be successfully completed at least thirty days prior to the launch of the ship. Authorization to proceed with the launch will be provided by the USCG upon successful completion of the LRR.
- 045.10.1 The Contractor shall provide written procedures and calculations for launching, docking, and undocking the ship. [045-04-1079]
- 045.10.1.1 These procedures shall be signed off by the Contractor's representative responsible for conducting this procedure.
- 045.10.1.2 Prior to launch of the ship, the Contractor shall develop stability calculations that show the ship has sufficient stability margin to be launched without capsizing and complete all waterborne fabrication and installations.
- 045.10.2 The Contractor shall secure the water way area in and around the launch facility and take precautions to ensure the ship will not capsize during and throughout the launch evolution.
- 045.10.2.1 If there is any evidence that the ship has been strained or damaged during launch; the ship shall be drydocked immediately.
- 045.11 Protection of Machinery, Equipment and Materials. The Contractor shall maintain, inventory, control, safeguard and provide security for the ship's material, machinery and equipment (CFE and GFE) at the contractor's facility,
- 045.11.1 Wear and damage incident to construction, and corrosion or other environmental deterioration shall be prevented.

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- 045.11.2 Equipment shall be safeguarded from damage or loss.
- 045.11.3 Piping, machinery, and equipment subject to freezing shall be kept drained or otherwise protected from freezing, except during tests and trials.
- 045.11.3.1 Standing water shall be removed on the weather decks or inside the ship daily.
- 045.11.3.2 Temporary covers shall be provided to protect boats, flag boxes, uptakes and intakes, searchlights, towline reels, and other equipment requiring protection from the weather as recommended by the manufacturer.
- 045.11.3.3 Temporary covers shall be fitted over temporary holes in the ship to protect the interior against damage due to weather.
- 045.11.3.4 The Contractor shall keep equipment, prefabricated parts, furniture, and other items, which are stored during construction of the ship clean and protected from the environment.
- 045.11.4 Unless otherwise specified, the Contractor shall leave preservatives applied by manufacturers intact (or replaced if deteriorated, damaged, or removed) until installation of the machinery or equipment on the ship. If removal of the preservative is necessary for testing the machinery or equipment prior to installation, the machinery or equipment shall be re-preserved and protected, in accordance with the manufacturer's instructions, until installed.
- 045.11.5 The Contractor shall remove preservatives on working parts prior to operation of machinery or equipment.
- 045.11.6 The contractor shall clean machinery and equipment (CFE and GFE) in accordance with the manufacturer's instructions.
- 045.11.7 The Contractor shall maintain jigs and fixtures throughout the period of performance.
- 045.11.8 The Contractor shall operate ship machinery and equipment only for the purpose of testing and trials, to support the testing of other shipboard machinery and equipment, or for maintenance.
- 045.11.8.1 The Contractor shall record the number of hours equipment is operated, including the hours the equipment is operated by the vendor prior to receipt by the Contractor in a Material History Log or database.

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- 045.11.8.2 The Material History Log or database shall be available for USCG review.
- 045.11.9 The Contractor shall conduct Original Equipment Manufacturer (OEM) lay-up procedures for ship machinery and equipment (CFE and GFE) while in the Contractor's facility.
- 045.11.10 The Contractor shall follow OEM and vendor installation and maintenance procedures for ship machinery and equipment while in the Contractor's facility.
- 045.11.11 The Contractor shall follow OEM and vendor procedures for operation, testing and trials.
- 045.11.12 The Contractor shall document machinery and equipment operation, routine equipment (CFE & GFE) maintenance actions and material condition in the Material History Log or database.
- 045.11.13 The Contractor shall remove or protect instruments subject to damage during flushing or hydrostatic testing.
- 045.12 Collision and grounding. The Contractor shall provide prevention of and response to collision and grounding involving the ship once waterborne.
- 045.12.1 If the ship is run aground or is involved in a collision after it is launched, the USCG shall be notified promptly, and an internal inspection for damage shall be conducted. In addition, the ship shall be drydocked for external inspection or shall be examined by divers.
- 045.13 Severe and/or destructive weather. The Contractor shall provide for preparation, protection and recovery from severe and/or destructive weather.
- 045.13.1 The Contractor shall implement the Destructive Weather Plan during times of actual or predicted abnormal weather conditions.
- 045.14 Fire and flooding. The Contractor shall provide prevention of and protection against fire and flooding.
- 045.14.1 While the ship is in the Contractor's possession, the Contractor shall implement an organization and procedures for safeguarding the ship and all its material and equipment from damage due to fire or flooding.
- 045.14.2 The Contractor shall provide for casualty, fire and flooding emergency egress aboard the ship and provide signage and diagrams.

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- 045.14.3 The Contractor shall maintain a Central Casualty Control Station (CCCS) on-board or within 100 ft. of an access to the ship.
- 045.14.3.1 The Contractor shall equip the CCCS with those items necessary to announce emergencies and direct fire fighting and flooding response teams.
- 045.14.3.2 The Contractor shall provide the CCCS with up-to-date drawings and diagrams which show the ship arrangements, accesses, stability information, and the location of fire fighting and flooding control monitoring and alarm systems and emergency equipment.
- 045.14.3.3 A copy of the current Care of Ship During Construction Plan shall be shall be located in the CCCS.
- 045.15 Fire Protection.
- 045.15.1 The Contractor shall maintain fire detection, fire prevention, and fire fighting systems and procedures for each ship.
- 045.15.2 The Contractor shall establish and maintain a Fire Prevention and Protection Plan (FPPP).
- 045.15.3 The Contractor shall give the ship's permanent firefighting systems a high priority for installation and activation.
- 045.15.3.1 The Contractor shall activate and maintain the permanent firemain system for emergency use immediately after launch.
- 045.15.3.2 The Contractor shall provide water supply for the ship's firemain of not less than 200 gal/min per 100 feet of ship length.
- 045.15.3.2.1 The water supply pressure shall be capable of providing a minimum nozzle pressure of 90 lb/in<sup>2</sup> when supplying fire nozzles at this demand.
- 045.15.4 During the initial stages of construction, the Contractor shall provide coverage of the ship and its external staging by hose lines located on the dock or building facility.
- 045.15.4.1 The location of the hose stations shall be selected to facilitate the leading of hose lines aboard via construction ramps, gangways, and ladders.
- 045.15.4.2 Hose stations shall be provided in number and with sufficient lengths of hose to provide coverage of all

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- areas of the ship by at least one 100-foot 1-inch hose line.
- 045.15.4.3 Hose stations shall be located clear of staging. The available pumping capacity at this stage of construction shall be sufficient to supply at least 25 percent of all hose lines.
- 045.15.5 As construction progresses to the stage where the ship form has developed in localized areas, the Contractor shall modify fire line coverage arrangements of such areas by positioning portable hose manifolds on clear and accessible areas of the structure.
- 045.15.5.1 Manifolds shall be supplied through 2-1/2-inch jumper hose lines from outlets along the dock or construction area.
- 045.15.5.2 Manifolds shall consist of not less than 1-inch hose outlets to facilitate the handling of hose lines in more confined areas.
- 045.15.5.3 Manifolds shall be provided in number and be equipped with sufficient hose to allow coverage of all portions of partially erected structure by at least one 100-foot hose line.
- 045.15.5.4 The total available pumping capacity shall be increased to supply at least the capacity of any temporary sprinkling systems plus 50 percent of all hose lines, at a minimum nozzle pressure of 90 lb/in<sup>2</sup>.
- 045.15.6 The Contractor shall locate a supply of mating hose adapters and spanner wrenches in a readily accessible location for connecting municipal fire department equipment to shipboard equipment.
- 045.15.7 The Contractor shall not use wood during construction except for temporary ladders, platform or scaffold planking. If used for this application, the wood shall be fire retardant in accordance with MIL-L-19140, Type II treatment, and shall have clearly visible Category 2 marking.
- 045.15.8 The Contractor shall utilize fireproof or fire resistant covers to prevent damage or possible ignition of equipment or materials due to falling sparks or other potential sources of fire.
- 045.15.9 The Contractor shall not operate machinery in engineering compartments prior to the installation and activation of the compartment's fixed fire suppression system(s).

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- 045.15.10 The Contractor shall not store flammable liquids on the ship during construction. The quantity of flammable liquids brought on board the ship shall not exceed that necessary for one day's use.
- 045.15.10.1 The Contractor shall locate firefighting foam producing equipment in the vicinity of flammable liquids.
- 045.15.11 The Contractor shall not stow flammable liquids in within 50 feet of the ship unless approved by the USCG.
- 045.15.12 The Contractor shall not bring fuels aboard the ship prior to the completion of the ship's permanent tankage and the activation of the ship's permanent fire fighting systems.
- 045.15.12.1 Fuels shall only be stored in the designated ship's tankage.
- 045.15.13 The Contractor shall arrange each industrial gas system supplied from shore to be secured by a master valve located on the ship weather deck or exterior location marked to show its purpose.
- 045.15.14 The Contractor shall equip combustible gas and oxygen manifolds placed aboard the ship with cut-off valves on the inlet side of each manifold.
- 045.16 Flooding Protection.
- 045.16.1 The Contractor shall provide and maintain a continuous system of flooding detection and methods for prevention and control during the times the ship is waterborne.
- 045.16.2 The Contractor shall provide and maintain a Flooding Prevention and Protection Plan (FLPPP).
- 045.16.3 The Contractor shall monitor and maintain control of waterborne stability, ballast condition, and watertight integrity.
- 045.16.4 The Contractor shall monitor and control openings in the watertight boundaries while the ship is afloat and control pressurized sources of flooding aboard the ship.
- 045.16.5 The Contractor shall provide cofferdams around openings in the hull at the waterline.
- 045.16.6 The Contractor shall secure openings in the hull within 4 feet above the waterline with a weathertight closure.

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- 045.16.7 The Contractor shall establish flooding control procedures to meet the following performance requirements:
- 045.16.7.1 Within 10 minutes of discovery of flooding, at least 2 pumps with a combined discharge capacity of at least 400 gpm (total) at a 50 ft discharge head shall be rigged and operating to dewater the ship.
- 045.16.7.2 Within 15 minutes after discovery of flooding, additional pumps with a combined discharge capacity of at least 950 gpm (total) at a 50 ft. discharge head shall be rigged and operating to dewater the ship.
- 045.16.8 The Contractor shall not have openings in watertight bulkheads below the damage control deck. On the damage control deck temporary lines shall have quick disconnects at watertight closures. Watertight closures shall be provided for temporary openings on the damage control deck.
- 045.17 Monitoring, Alarms and Controls.
- 045.17.1 The Contractor shall provide during the entire time that the ship is under construction, alarm systems for reporting fires or flooding, for warning personnel to cease all hot work, and for evacuating the ship.
- 045.17.1.1 These systems shall have an emergency back-up power source to ensure alarms are functional in the event of loss of primary power.
- 045.17.1.2 The Contractor shall provide an annunciating device in the CCCS to indicate the reporting of any alarm.
- 045.17.1.3 Alarm conditions shall cause audible and visual indication in the CCCS.
- 045.17.2 The Contractor shall provide a fire alarm system.
- 045.17.2.1 A sufficient number of alarm boxes, marked and designated with indicator lights, shall be installed to permit a person in any section of the ship to report a fire within one minute.
- 045.17.2.2 Each box on the circuit shall automatically produce a clear and distinctive signal which can be heard, above ship construction noise, throughout the ship and in the CCCS.
- 045.17.3 The Contractor shall sound the hot work alarm prior to fuel pumping operations and in event of a flammable liquid spill or the leakage of a flammable compressed gas.

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- 045.17.3.1 The alarm shall produce a clear signal distinct from the fire alarm signal.
- 045.17.3.2 The hot work alarm shall be actuated from the CCCS.
- 045.17.4 Prior to the launch date, the Contractor shall install a temporary flooding alarm system in compartments below the waterline which will contain machinery or electronics equipment.
- 045.17.4.1 The alarms shall be set to trip when the water level in the compartment reaches a level of 6 inches above the bottom plate of that compartment, unless installed equipment will be threatened before the water reaches this depth, in which case the alarms shall be set to trip before the water level can damage the equipment.
- 045.17.4.2 Once the ship's permanently installed flooding alarm system is placed in operation, the compartments protected by that system will no longer require the temporary alarm.
- 045.17.4.3 The temporary alarm system shall be provided with surveillance measures to indicate system malfunctions.
- 045.17.5 An audible and visual system shall be provided to warn personnel to evacuate the ship.
- 045.17.5.1 The audible phase shall consist of a klaxon horn, siren, or other device that is clearly distinct from the fire and hot work alarms.
- 045.17.5.2 Sounding of the evacuation alarm shall be accompanied by the flashing of the temporary lights used during those stages of construction when the ship service lighting system is not used.
- 045.17.5.3 During stages of construction when the ship service lighting system is used for illumination, a minimum of one flashing light shall be provided at each alarm box.
- 045.17.5.4 The flashing lights may be supplied and controlled from the audible alarm circuit.
- 045.17.5.5 Both the audible and visible signal shall be actuated from the CCCS.
- 045.18 Drills. The Contractor shall conduct periodic drills to demonstrate the effectiveness of personnel assigned to execute FPPP and the FLPPP.
- 045.18.1 The Contractor shall conduct a fire drill once every 3 months.

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- 045.18.1.1 An additional fire drill shall be conducted once every 6 months at a time selected by the USCG.
- 045.18.2 The Contractor shall conduct a separate flooding drill once every 3 months.
- 045.18.2.1 An additional flooding drill shall be conducted once every 6 months at a time selected by the USCG.
- 045.18.3 The Contractor shall demonstrate the ability to meet the performance requirements incorporated in the FPPP and the FLPPP during the drills.
- 045.18.3.1 Failure to meet those requirements may necessitate additional drills being performed.
- 045.18.3.2 These additional drills shall be conducted at times selected by the USCG.
- 045.18.4 The Contractor shall document the results of and required corrective actions identified during each drill.
- 045.18.5 The Contractor shall document completion of corrective actions.
- 045.19 Preparation for Delivery.
- 045.19.1 The Contractor shall establish a compartment close-out process that incorporates USCG QA participation.
- 045.19.1.1 When discrepancies are resolved, the Contractor shall present each compartment for final compartment close out.
- 045.19.2 The Contractor shall clean, inspect, and preserve tanks and voids and inaccessible spaces prior to presenting them for close out inspection.
- 045.19.3 The Contractor shall maintain surface coatings after initial application in accordance with the Paint and Deck Covering Schedules and manufacturer's recommendations.
- 045.19.4 The Contractor shall sweep, wash down or otherwise clean the interior and exterior of the ship.
- 045.19.5 The Contractor shall maintain the ship in a habitable condition.
- 045.19.6 Bitts, chocks and other mooring fittings that are damaged by use of wire rope shall be repaired by grinding the working surfaces smooth.
- 045.19.7 After Acceptance Trials and prior to delivery the Contractor shall:
- 045.19.7.1 Test and evaluate lubricants on board the ship in sumps 2 gallons or larger. If the lubricant shows

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- contamination beyond acceptable limits the sump shall be drained and refilled with new lubricant.
- 045.19.7.2 Replace Lube Oil in the Propulsion Diesel Engines, Propulsion Reduction Gears, and Auxiliary Diesel Engines with new oil.
- 045.19.7.3 Replace (or clean if applicable) filters, clean strainers, and replace UPS batteries.
- 045.19.8 The underwater body shall be cleaned and touch-up painted within 12 months of delivery.
- 045.19.9 At ship delivery, the Contractor shall verify that the liferafts were certified less than one year prior to delivery.

**070 Certifications**

- 070.1 Certification processes. The Contractor shall manage the certification processes and product matrix.
- 070.1.1 The Contractor shall provide the certification in the Product matrix that are assigned to the Contractor.
- 070.1.2 The Contractor shall support the certification efforts of the Product Matrix where the certifications are not assigned to the Contractor.
- 070.2 Booklet of Ship Certifications. The Contractor shall provide a Booklet of Ship Certifications required by the OPC System Specification. [070-04-1066]

**083 Supply Support**

- 083.1 Outfitting Operations. The Contractor shall conduct outfitting operations in accordance with the Outfitting Operations Plan.
- 083.2 Operating Space Items (OSI)/ Store Room Items (SRI) and General Use Consumable Lists (GUCL). The Contractor shall update Operating Space Items (OSI)/ Store Room Items (SRI) and General Use Consumable Lists (GUCL) listings for Government and Contractor furnished equipment. [083-04-2111] Outfitting.
- 083.2.1. The Contractor shall accomplish receipt, identification, binning, loading, and stowage of Government and Contractor furnished SRI and OSI and Contractor furnished Installation and Check-Out Spares (INCOS) in accordance

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with MIL-STD-1339. The Contractor shall perform the receiving, inspection, identification, handling, and stowage functions for material and authorized allowance items.

- 083.2.1.1 Receipts shall be checked against packing lists and purchase orders to verify correctness and completeness.
- 083.2.1.2 Missing, damaged, or unusable material shall be replaced prior to its planned installation or stowage on the ship.
- 083.2.1.3 Replacements shall be reported to the USCG.
- 083.3 Inventory/Staging System.
- 083.3.1. The Contractor shall deliver OSI, SRI, OM&S, ST&E, and GUCL items with the ship.
- 083.3.2. The Contractor shall provide Outfitting Material Status Reports in accordance with MIL-STD-1339 to monitor and track onboard allowance material. [083-04-1949]
- 083.4 Loading/Binning/Stowage.
- 083.4.1. The Contractor shall load and stow SRI, OSI, and GUCL items.
- 083.4.2. The Contractor shall construct Mock-ups of the ship's SRI storerooms in accordance with MIL-STD-1339 and assign permanently identifying numbers to the drawer, bin, and rack locations.
- 083.4.3. Identical material shall be stowed in a single location.
- 083.4.4. In addition to the standard human-readable location number labels, each location shall be marked with the same location number using a bar code label.
- 083.4.4.1 The bar code label shall be provided in accordance with AIM-BC1 and COMDTINST 4000.4. Location bar code labels shall be "high density" and shall be of the "general use" type for the purpose of determining label height. Direct thermal printing (thermal transfer) labels shall be used, and shall be affixed to the right of the human-readable labels.
- 083.4.5. The Contractor shall accomplish binning in accordance with MIL-STD-1339. During binning, the following criteria shall apply:
  - 083.4.5.1 No drawer, bin, rack, or cabinet shall be filled to over 80% of capacity.
  - 083.4.5.2 Whatever the stowage method used, parts shall be secured against coming adrift.

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- 083.4.5.3 Small Item Stowage. Small items, such as, resistors, capacitors, and transistors which are packaged in envelopes shall be stowed standing on end in small version modular, high density storage equipment cabinets and compressed between drawer dividers.
- 083.4.5.4 The Contractor shall select the appropriate stowage based on a balance between stowage space utilization and item accessibility (drawer bin, rack, or bulk stowage). In selecting the appropriate type of stowage device, the stowage space requirements for the piece count for a line item shall be considered in addition to the size of the individually packaged line item.
- 083.4.5.5 Drawer Size Selection and Compartmentation. The size and number of drawers, drawer partition, and dividers required for small version modular drawer storage cabinets in storerooms shall be determined during the binning process. Drawer sizes shall be selected which offer the best stowage cube utilization for items to be stowed. Drawer partitions and compartments shall be used for large items and those items having a large depth of stock. Smaller items, having a low depth of stock, may be commingled in a single drawer compartment provided no more than ten line items are located within a single compartment.
- 083.4.5.6 The number of shelves for adjustable height shelving units for shelf cabinets located in storerooms shall be determined during the binning process. The shelves shall achieve a balance between stowage cube utilization and material accessibility. Shelf compartmentation shall maintain a reasonable degree of item accessibility and retrievability while maintaining good stowage cube utilization.
- 083.4.6. The Contractor shall provide a Binned Material List to verify inventory accuracy of binned SRI in accordance with MIL-STD-1339. [083-04-2006]
- 083.4.7. The Contractor shall provide the Shipboard Stowage Locations List with the applicable designated stowage location in accordance with MIL-STD-1339. [083-04-1235]
- 083.4.8. Contractor furnished onboard allowance material received after ship departure shall be packaged and shipped, at Contractor's expense, in accordance with instructions provided by the Contracting Officer.
- 083.5 System Stock.

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- 083.5.1. The USCG will provide a buy list for system stock and insurance spare requirements.
- 083.5.2. The contractor shall procure, package, and ship system stockage items and insurance spares as directed by the USCG. Contractor shall maintain and provide a system stock status report. [083-04-2348]

**084 Preservation, Packing and Marking**

- 084.1 Shipments. The contractor shall utilize ASTM D3951, for shipments that are:
  - 084.1.1 Items intended for immediate use;
  - 084.1.2 Small parcel shipments Continental United States (CONUS), not-for-stock;
  - 084.1.3 Direct Vendor Deliveries (DVDs) (CONUS ONLY); and
  - 084.1.4 Items for ship outfitting.
- 084.2 Storeroom Items. Packaging shall prevent damage caused by movement or weight of parts in a box. A Packing List itemizing parts in the box shall be mounted inside the lid of each box.
  - 084.2.1 The Contractor shall inspect, and repackage (if needed) GFE spare parts for binning and storage. Marking and bar coding shall be in accordance with MIL-STD-129.
  - 084.2.2 Items that will be removed from containers and placed in racks or shelf type stowage shall be protected against physical and environmental damage during storage.
  - 084.2.3 Items designated for system stock and insurance spare shipments shall be packed in accordance with MIL-STD-2073-1.
- 084.3 Packing and Preservation Data. The Contractor shall develop Packing and Preservation data, and when required, Special Packing Instructions (SPIs), and document the results of the analyses in accordance with PHS & T Logistics Product Data Report [084-04-1236].
- 084.4 Hazardous Materials (HAZMAT). For items containing Hazardous Materials (HAZMAT) that cannot be packaged in accordance with MIL-STD-2073-1, the contractor shall perform and shall acquire data necessary to support compliance with the Performance Oriented Packaging (POP) requirements of HAZMAT as defined in Title 49, Code of Federal Regulations (CFR), the International Maritime Organization's International

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Maritime Dangerous Goods Code (IMDG) and the International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Hazardous Goods.

- 084.4.1 The contractor shall document the results of the testing and data acquisition per MIL-STD-2073-1, and ensure the items are packaged in accordance with the results of the POP analysis. [084-04-2336]
- 084.5 Containerization. For those items that require containerization per MIL-STD-2073-1, the contractor shall request a search of the Department of Defense (DoD) Container Design Retrieval System (CDRS) for any specialized reusable container designs. [084-04-2337]
- 084.5.1 If the CDRS system has a suitable container design, the contractor shall use that for the subject item. If CDRS does not have a suitable container, the contractor shall design and fabricate a new container in accordance with MIL-STD-2073-1. [084-04-2338]
- 084.5.2 The contractor shall fabricate the container and package items with the container for shipment to the Coast Guard designated location.

**088 Human Systems Integration (HSI)**

- 088.1 Performance Support and Training (PS&T).
- 088.2 Factory Training Program. The Contractor shall develop and provide a Factory Training Program and report. [088-04-1295]
- 088.2.1 Factory Training Analysis. [088-04-1296]
- 088.2.1.1 The Contractor shall use the Standard Operating Procedures for the Coast Guard's Training System to analyze every operator and maintainer job associated with the Factory Training requirements in the Training Development Plan (TDP). OEM Manuals shall be used for training analysis. The Contractor shall conduct a task analysis of every operator and maintainer job associated with the Factory Training requirements in the TDP. The task analyses shall identify every task associated with operating and maintaining the system/equipment associated with Factory Training and provide rationale as to whether the tasks should be trained during Factory Training. The tasks identified for Factory Training shall become the Factory Training objectives.
- 088.2.1.2 If an existing Commercial off the Shelf (COTS) training course does not satisfy the training objectives, the

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Contractor shall identify and develop supplemental material which shall meet the requirements of Standard Operating Procedures for the Coast Guard's Training System.

- 088.2.2 Factory Training Design Document. [088-04-1297]
- 088.2.2.1 To document and substantiate the progression from Factory Training analyses to training materials, the Contractor shall develop curriculum outlines for each training course, including COTS training courses, in accordance with the Standard Operating Procedures for the Coast Guard's Training System. The Contractor shall detail the blueprint for each Factory Training course in the Factory Training Design Document.
- 088.2.3 Factory Training Materials. [088-04-1299]
- 088.2.3.1 Factory Training Materials shall include necessary documentation to train each Factory Training objective, as outlined in the Factory Training Design Document.
- 088.2.3.2 Factory Training Materials shall include COTS Factory Training courses and supplemental material as defined in the analysis.
- 088.2.3.3 The Contractor shall provide Factory Training job aids when available from COTS courses.
- 088.2.4 Factory Training Schedule. [088-04-1300]
- 088.2.4.1 The Contractor shall provide the Factory Training Schedule.
- 088.2.5 Factory Training Evaluation. [088-04-1298]
- 088.2.5.1 The Contractor shall conduct Level 2 evaluations as defined by Standard Operating Procedures for the Coast Guard's Training System to demonstrate the students' learning of Factory Training objectives.
- 088.2.5.1.1 For Level 2 evaluation compliance, the Contractor shall ensure each student performs every training objective set forth in the Factory Training Design Document.
- 088.2.5.1.2 The Contractor shall ensure Factory Training vendors conduct Level 2 evaluations.
- 088.3 Familiarization Training Program. The Contractor shall develop and provide a Familiarization Training Program and Report: [088-04-1301]
- 088.3.1 Familiarization Training Analysis. [088-04-2045]
- 088.3.1.1 The Contractor shall use a the Standard Operating Procedures for the Coast Guard's Training System to

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analyze every operator and maintainer job to the individual equipment level to determine those jobs that shall be included in the Familiarization Training. Once available, USCG approved documentation (e.g., operations and technical manuals, operator and maintenance procedures) shall be used for training analyses. The analysis shall consist of two phases.

088.3.1.2 During the first phase, the Contractor shall conduct a needs assessment to determine the operator jobs for which the crew will not already be attending training. This training may be USCG provided or Contractor Factory Training, and shall be on the as-delivered configuration of the ship. If no training is already planned or planned training will not be provided on the as-delivered configuration, then there is a training gap. The Contractor shall provide the list of equipment operator jobs with training gaps as the input to the second phase.

088.3.1.3 During the second phase, the Contractor shall conduct a task analysis of each individual equipment and system job training gap. The task analysis shall identify every task associated with operating and maintaining the system/equipment and provide a rationale as to whether the tasks should be trained during Familiarization Training. The tasks identified for Familiarization training shall become the Familiarization Training objectives.

088.3.1.4 To complete these analyses, the Contractor shall use Accomplished Performers (APs) and/or Subject Matter Experts (SMEs) who are technically competent or experienced with the individual pieces of equipment or integrated system. The APs/SMEs shall be identified in the Training Development Plan. When available from the USCG, the Contractor shall include Government APs and/or SMEs.

088.3.2 Familiarization Training Design Document. [088-04-1302]

088.3.2.1 To document and substantiate the progression from Familiarization Training analysis to training materials, the Contractor shall develop curriculum outlines for each training course, in accordance with the Standard Operating Procedures for the Coast Guard's Training System. The Contractor shall detail the blueprint for each Familiarization course in the Familiarization Training Design Document.

088.3.3 Familiarization Training Materials. [088-04-1304]

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- 088.3.3.1 Familiarization Training Materials shall include all necessary documentation to train each Familiarization Training objective, as outlined in the Familiarization Training Design Document.
- 088.3.3.2 The Contractor shall develop and provide Familiarization Training job aids, utilizing the Standard Operating Procedures for the Coast Guard's Training System for guidance on job aid applicability and development.
- 088.3.3.3 Familiarization Training Materials shall be accepted by the USCG prior to the start of any Familiarization Training.
- 088.3.4 Familiarization Training Schedule. [088-04-1305]
- 088.3.4.1 The Contractor shall provide the Familiarization Training Schedule.
- 088.3.5 Familiarization Training Evaluation. [088-04-1303]
- 088.3.5.1 The Contractor shall conduct Level 2 evaluations (as defined by Standard Operating Procedures for the Coast Guard's Training System to demonstrate the students' learning of Familiarization Training objectives.
- 088.3.5.1.1 For Level 2 evaluation compliance, the Contractor shall ensure each student performs every training objective set forth in the Familiarization Training Design Document.
- 088.3.5.1.2 The Contractor shall ensure Familiarization vendors conduct Level 2 evaluations.
- 088.4 Factory Training.
- 088.4.1 The Contractor shall conduct Factory Training in accordance with the approved training documentation. The Contractor shall conduct Factory Training during the nine months prior to delivery of the ship and it shall be completed prior to the commencement of Familiarization Training. Factory Training shall be provided for the systems/equipment and durations listed (duration is per convening). If necessary, the duration and systems/equipment shall be negotiated with the USCG based on the as-built configuration, but any modification shall be supported by a systemic training analysis:
- 088.4.1.1 Propulsion Engine (80 hours)
- 088.4.1.2 Propulsion Control (40 hours)
- 088.4.1.3 Reduction Gear (40 hours)
- 088.4.1.4 Generator Engines (40 hours)

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- 088.4.1.5 Electrical Distribution Switchboards (40 hours)
- 088.4.1.6 Steering System (40 hours)
- 088.4.1.7 Sensors and Radars (40 hours)
- 088.4.1.8 C2 System (40 hours)
- 088.4.1.9 Integrated Bridge System (40 hours)
- 088.4.1.10 Internal Communications (40 hours)
- 088.4.1.11 External Communications (40 hours)
- 088.4.1.12 Gyros (40 hours)
- 088.4.1.13 Ships Video Distribution System (40 hours)
- 088.4.2 The Contractor shall limit the number of students in each Factory Training event based on student/instructor ratios, training aid/student ratios, or space limitations detailed in the Factory Training Design Document. If the Factory Training Design Document indicates that the number people to be trained exceeds the limitations of a single training event, additional training events shall be provided by the Contractor and accounted for in the Factory Training Schedule. Additional training events may require multiple convenings for the same system/equipment (e.g., 12 crew need training on engines but the course is limited to 8 students due to number of training aids therefore the Contractor shall provide two 80-hour convenings of the training).
- 088.4.3 Factory Training shall be performance-based. Factory Training shall cover all Operational level (O-level) equipment maintenance, troubleshooting, and operation. The Contractor shall ensure all maintenance and troubleshooting training is linked to the Reliability Centered Maintenance analyses, as they are available and documented in the Factory Training Analysis and Design Document. Factory Training shall be conducted at the Contractor's or subcontractor's facility as appropriate. The Contractor shall obtain prior USCG approval before arranging any COTS training in a foreign country. Factory Training shall be conducted by a factory authorized training representative.
- 088.4.4 Each instructor selected by the Contractor to conduct Factory Training shall be technically competent on the operation and maintenance of ship systems and equipment and any associated equipment or tools required for operation or maintenance. Each instructor shall have verifiable experience providing training. The Contractor

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shall provide written documentation and demonstration of such competencies.

088.5 Familiarization Training.

088.5.1 The Contractor shall conduct Familiarization Training in accordance with the approved training documentation. Familiarization Training shall be conducted during the 75 calendar days prior to delivery of the ship and shall consist of no more than 480 instructional hours of training for the crew and shore support personnel. The total number of instructional days shall be optimized by conducting simultaneous training events (i.e., two instructors teaching two different topics to two different set of students during the same one-hour block would be two instructional hours). At a minimum, 80 instructional hours of Familiarization Training shall be conducted underway.

088.5.2 Individual Familiarization Training sessions shall be limited to no more than 10 people. If the Familiarization Training Design Document requires more than 10 people to be trained for a particular topic, additional events shall be provided by the Contractor and accounted for in the Familiarization Training Schedule. Once the Familiarization Training period begins, the Contractor shall continue providing familiarization training days (Monday through Friday with no more than 8 hours in a 24 hour period) without interruption or break until all training requirements are met. The Contractor shall obtain USCG approval before making any deviations in the Familiarization Training schedule.

088.5.3 Familiarization Training shall be performance-based and shall be conducted using operational equipment installed onboard the to-be-delivered ship. The Contractor shall conduct all Familiarization Training at the shipyard where the ship is being constructed. If the ship is unavailable for Familiarization Training, the Contractor shall ensure an identical training environment (e.g. mock-up, training aid, alternate ship) is locally available for the conduct of the training. Familiarization Training instructors shall provide step-by-step demonstration of system/equipment operation and maintenance that shall be immediately followed by a time period to allow students to reenact and perform the identical sequence of tasks.

088.5.4 Each instructor selected by the Contractor to conduct Familiarization shall be technically competent on the

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operation and maintenance of ship systems and equipment and any associated equipment or tools required for operation or maintenance. Each instructor shall have verifiable experience providing training. The Contractor shall provide satisfactory written documentation and demonstration of such competencies.

- 088.6 Onboard and Embedded Training Market Research Report. The Contractor shall provide an update to the Onboard and Embedded Training Market Research Report. [088-04-1306]
- 088.6.1 The Contractor shall provide identical ship sets, of the following systems and equipment:
- 088.6.1.1 C4ISR System as defined by section 400
  - 088.6.1.2 Meteorological Equipment (section 494)
  - 088.6.1.3 Generator Set
  - 088.6.1.4 Switchboard and EPCS
  - 088.6.1.5 Propulsion Components for a shaft set (up to the reduction gear) and Local Control Panels
  - 088.6.1.6 Propulsion Control System
  - 088.6.1.7 MPCMS and consoles
- 088.6.2 The Contractor shall provide the ship's sets software, wiring, and cabling to install the system/equipment at the points of delivery. Upon completion of installation, ship's sets shall resemble and operate, as nearly as practical, to the actual ship configuration.
- 088.6.3 The Contractor shall provide the special tools required to operate and conduct OEM recommended maintenance on each ship's set with the training aids.

**092 Test Administration and Testing**

- 092.1 OPC Test Program. The Contractor shall execute the OPC Test Program in accordance with the TEPP.
- 092.1.1 The Contractor shall perform the tests necessary to demonstrate compliance with the requirements of the OPC System Specification.

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**094 Trials**

094.1 Trials. The Contractor shall perform Builder's Dock Trials (BDT), Builder's Sea Trials (BST), and Acceptance Trials (AT) in accordance with the Trials Plan.

**97 Inclining Experiment**

097.1 Lightship survey and the inclining experiment. The Contractor shall notify the Contracting Officer 4 weeks in advance to allow USCG personnel to be aboard the ship to witness the collection of data during the lightship survey and the inclining experiment.

097.1.1 In addition to the information required by NVR Part 0, Chapter 5, Section 7, Subsection 2 (which references ASTM F1321), the Inclining Experiment Report shall include the load condition summaries and load details of the Full Load and Minimum Operating Conditions and roll period from sallying the ship.

097.1.2 The Contractor shall perform a stability check and inclining experiment on each ship.

097.1.3 The Contractor shall perform the stability check before sea trials to verify that the ship will be stable during the trials.

097.1.3.1 The stability check shall include a lightweight survey that shall include at least two movements of test weights to determine the ship's lightship weight and KG.

097.1.4 The Contractor shall perform the inclining experiment after the sea trials and prior to delivery of the fully outfitted ship.

097.1.4.1 The inclining experiment shall include measurements to determine the "as-inclined" natural roll period. This shall be determined by sallying the ship.

097.1.4.2 Trim during the inclining experiment shall be between 0 and 2 feet by the stern.

097.1.4.3 If, in the opinion of the Contracting Officer, or the USCG Technical Authority, the weather or any other condition is not satisfactory, the inclining experiment shall be postponed.

097.1.5 On the day of the test, shortly after completion, a copy of the test data shall be provided.

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**098 Models and Mockups**098.1 Display Model.

- 098.1.1 The Contractor shall construct a scale model of the ship suitable for display.
- 098.1.2 The model shall be built to a scale of 1:25.
- 098.1.3 The hull, pilothouse and components of the model shall conform accurately to the scaled dimensions of the ship.
- 098.1.4 The model shall be constructed and finished using durable materials that are resistant to humid conditions.
- 098.1.5 The model shall be of sufficient detail to accurately reflect the ship including, but not limited to, the following:
- 098.1.5.1 Realistic colors and finishes.
- 098.1.5.2 A hull which is outfitted to accurately reflect the ship including any prominent components that may be provided on the ship such as deck gratings.
- 098.1.5.3 Exterior equipment and furnishings including: masts; hatches; windows and portlights; vents; mooring fittings; tow bitt(s); towline reel; handrails; non-skid; antennas; accommodation ladders; lights; outfit including P-6 pump container, P-100 pump container, life rings, distress marker lights, and boat hooks; window wipers; weapons; and anchor.
- 098.1.5.4 Transparent pilothouse windows, allowing visibility to a fully outfitted pilothouse. The interior of the pilothouse shall reflect the configuration of the ship to include: seats; consoles; ladders; hatches; navigation displays and radios; and primary propulsion controls.
- 098.1.5.5 The Cutter Boats shall be shown stowed, covers shall not be fitted.
- 098.1.5.6 The model shall include USCG markings, including the stripe, "U.S. Coast Guard", hull number, and name. The Contracting Officer will specify the hull number and name when the model is ordered.
- 098.1.5.7 The model shall set on a scale cradle and be mounted to an oak base with a "honey" finish.
- 098.1.5.7.1 The base shall be provided with port and starboard brass plaques that identify the model and the "US Coast

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Guard Offshore Patrol Cutter (OPC)" and give the basic dimensions of the ship and the manufacturer's name.

- 098.1.6 The model shall be enclosed in a safety plate glass case on a display table in accordance with CG Drawing FL 3209-8.
- 098.1.7 The model shall be provided with a display table that is 30 inches (0.76m) high with a width and depth appropriate to contain the model.
- 098.1.8 The table legs shall be untapered and square in cross section.
- 098.1.9 The table shall be of oak with a natural finish. The model, case, and table shall be provided with a crate suitable for shipping.

**099 Photographs and Videos**

- 099.1 Photographs and videos. The Contractor shall provide photographs and videos that provide official documentation of the design during the construction period. [099-04-1375]
- 099.2 Photographs.
- 099.2.1 The Contractor shall take color digital photographs, 12 Megapixels or greater, and color High Definition (HD 1080p) digital videos with audio.
- 099.2.1.1 Photographs and videos shall be prepared and shall become the property of the USCG.
- 099.2.1.2 The USCG will not be restricted by copyright, patent, or any other restraint in the use or disposition of any files, or prints.
- 099.2.1.3 Files shall be in RAW format.
- 099.2.2 The Contractor shall take interior photographs of spaces.
- 099.2.2.1 The photos shall be comprehensive general views of the arrangement of machinery, apparatus, appliances, furniture, plumbing fixtures, fittings, instruments, outfit, and equipment within the space.
- 099.2.2.2 The Contractor shall obtain permission from the Contracting Officer before taking photographs of classified systems or equipment.
- 099.2.2.3 Camera positions shall be selected to include the greatest amount of detail with the fewest number of photographs.

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- 099.2.2.4 Wide angle lenses shall be used wherever necessary in congested spaces to obtain the largest practicable coverage.
- 099.2.3 Camera positions for photographs of exterior portions of the ship shall be selected to include as large a field as practicable, without objects within the field becoming indistinct and without objectionable foreshortening effects. The camera lens shall have sufficient depth of field so that parts of the ship in the background will also be in focus.
- 099.3 Progress Photographs.
- 099.3.1 The Contractor shall take progress photographs at start of fabrication when the keel is laid and when the ship reaches the 20, 40, and 60 percent points of completion and thereafter as the progress reaches each additional 10 percent points of completion.
- 099.3.2 Progress photographs shall be taken in such a manner that they show each major assembly prior to erection, and the entire length of the ship, and general state of progress of work. The Contractor shall take photographs as follows:
- 099.3.3 Exterior:
- 099.3.3.1 Abeam-of-the-ship showing the entire length and the ship's profile.
- 099.3.3.2 From elevated positions forward and aft so that the entire length of the ship including all major assemblies is depicted and the general state of progress shown.
- 099.3.3.3 Topside fittings, sensors, weapons, and antennas.
- 099.3.4 If construction is suspended by the USCG, the Contractor shall take photographs showing general views of the ship to depict the degree of completion and location of the ship, whether on the ways, in a building dock or other construction facility, or alongside a pier.
- 099.3.4.1 Additional photographs shall be taken showing the status of machinery spaces if the general view is inadequate for this purpose.
- 099.4 Keel Laying Photographs.
- 099.4.1 The Contractor shall take photographs and videos of the keel laying ceremonies to provide a complete story of the keel laying event.
- 099.4.2 The Contractor shall annotate photographs to identify the persons shown.

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- 099.5      Launching Photographs.
- 099.5.1      The Contractor shall take photographs and videos of the launching or float off ceremony to provide a complete story of the launching or float off; and photographs shall also include a stern view looking forward and bow view looking aft depicting cradles if applicable.
- 099.5.2      The Contractor shall annotate photographs to identify the persons shown.
- 099.6      Christening Photographs.
- 099.6.1      The Contractor shall take photographs and videos of the christening ceremony to provide a complete story of the christening and attendant ceremonies.
- 099.6.2      The Contractor shall annotate photographs to identify the persons shown.
- 099.7      Photographs of Ship as Completed.
- 099.7.1      The Contractor shall take photographs to show the full length of the ship:
- 099.7.1.1      Broadside views (Port and Starboard).
- 099.7.1.2      Head-on view.
- 099.7.1.3      View from directly astern.
- 099.7.1.4      View of the top of the deckhouse.
- 099.7.2      The Contractor shall annotate or mark the photographs with the following information:
- 099.7.2.1      Name and official identification number of the ship.
- 099.7.2.2      Designation or description of portion of the ship shown.
- 099.7.2.3      Yard or place where photographed.
- 099.7.2.4      Date taken.
- 099.7.2.5      A sequential number.
- 099.7.3      The Contractor shall take photographs of the historical data plaque and of any other plaque installed before delivery of the ship.
- 099.7.4      The space or portion of the ship to be photographed (including structure, fittings, instruments, equipment, deck coverings, and paint work) shall be completed. Staging and tools, extraneous wires, piping, and hose, and all dirt, rubbish and dunnage shall be removed before photographs are taken.
- 099.7.5      The Contractor shall take the following photographs as a minimum:

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- 099.7.5.1 Interior:
- 099.7.5.1.1 Bridge / Pilot House.
  - 099.7.5.1.2 Weapon Mounts.
  - 099.7.5.1.3 Galley.
  - 099.7.5.1.4 Scullery.
  - 099.7.5.1.5 Trash Processing Room.
  - 099.7.5.1.6 Storerooms.
  - 099.7.5.1.7 Crew Recreation / Lounge Spaces.
  - 099.7.5.1.8 Wardroom
  - 099.7.5.1.9 CO Cabin
  - 099.7.5.1.10 Staterooms (one of each type).
  - 099.7.5.1.11 Magazines (empty).
  - 099.7.5.1.12 Mooring and Towing Spaces/Facilities.
  - 099.7.5.1.13 Boat Launching facilities.
  - 099.7.5.1.14 Hangar.
  - 099.7.5.1.15 Helo handling systems.
  - 099.7.5.1.16 Helo Landing Control Room.
  - 099.7.5.1.17 Decontamination Station.
  - 099.7.5.1.18 Medical Treatment Room and Ward.
  - 099.7.5.1.19 Shops.
  - 099.7.5.1.20 Mess Decks.
  - 099.7.5.1.21 Fueling at Sea Station.
  - 099.7.5.1.22 Replenishment at Sea Stations.
  - 099.7.5.1.23 Life Raft Stowage.
  - 099.7.5.1.24 Training Rooms.
  - 099.7.5.1.25 Laundries.
  - 099.7.5.1.26 Ship's Armory.
  - 099.7.5.1.27 Ship Store.
  - 099.7.5.1.28 Offices.
  - 099.7.5.1.29 Main and Auxiliary Engine Rooms.
- 099.8 Identification and Trial Photographs.
- 099.8.1 The Contractor shall take identification photographs when the ship is on trials. Photographs shall show the ship with all staging and other extraneous equipment removed

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to ensure a true representation of the ship as it will appear when ready for sea.

- 099.8.1.1 The Contractor shall take photographs of the ship on both Builder's and Acceptance Trials at various speeds. Photos shall be taken of the high-speed runs.
- 099.8.1.2 The Contractor shall take at least six of the photographs, including at least one of the high-speed runs, at low angle aerial or surface views depicting different angles of the ship.
- 099.8.1.3 The Contractor shall take ninety minutes of aerial motion video as directed by the USCG.
- 099.8.2 The Contractor shall take identification photographs containing the following views:
  - 099.8.2.1 With camera approximately horizontal:
    - 099.8.2.1.1 Broadside view (port and starboard).
    - 099.8.2.1.2 Bow view about 45 degrees off centerline.
    - 099.8.2.1.3 Stern view about 135 degrees off centerline.
    - 099.8.2.1.4 Head-on view.
    - 099.8.2.1.5 View from directly astern.
  - 099.8.2.2 With camera at an elevated position, preferably in an aircraft, and at a depression angle of between 20 and 40 degrees:
    - 099.8.2.2.1 Same views as above. (These photographs shall show the entire topside of the ship and include all weapons.)
- 099.8.3 A set of identification photographs shall be used for the purpose of identifying the installed ship's antennas.
  - 099.8.3.1 Each antenna shall be annotated with the antenna number.
  - 099.8.3.2 The photographs shall contain an identification matrix associating each antenna with their numbers and names, nomenclatures, and the terminating equipments for each antenna.
- 099.8.4 Photographs shall show the ship as completed.
- 099.9 Inclining Experiment Photographs.
  - 099.9.1 The Contractor shall take photographs of the ship immediately prior to the test which shows the ship's condition, arrangement of the inclining experiment equipment and test weights, and all draft marks.
  - 099.9.2 These photographs shall be included in the Inclining Experiment Report.

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- 099.10 Physical Models and Mock-ups.
- 099.10.1 The Contractor shall take photographs of the physical models and mock-ups showing salient features related to the purpose of the mock-ups.
- 099.10.2 The Contractor shall take videos of evolutions conducted using the mock-ups.
- 099.11 Commissioning Photographs and Videos.
- 099.11.1 The Contractor shall take photographs and videos of the commissioning ceremonies to provide a complete story of the commissioning and attendant ceremonies.
- 099.11.2 The Contractor shall annotate the photographs to identify persons shown.
- 099.12 PRO Photographs and Videos.
- 099.12.1 The Contractor shall allow the PRO to take photographs and video in the yard and aboard the ship for USCG use. The Contractor shall establish a process for the PRO to be able to take photographs and videos.

**256 Propulsion Machinery Seawater**

- 256.1 High accuracy fluid flow. If sharp-edged orifices, e.g. ASME standard square edge bevel bore, are specified for high accuracy fluid flow applications, the Contractor shall verify proper installation relative to flow direction and mark them to indicate flow direction.

**400 Electronic Systems**

- 400.1 C4ISR system installation. The Contractor shall:
- 400.1.1 Install C4ISR equipment.
- 400.1.2 Install the power distribution system from the power panels to the C4ISR equipment.
- 400.1.3 Install low-pressure dry air and any associated distribution equipment and manifolds.
- 400.1.4 Furnish fasteners and install foundations in accordance with mounting information.
- 400.1.5 Provide, install, hook-up and test inter- and intra-compartment cables.

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- 400.1.6 Utilize Installation and Checkout (INCO) kits and Installation Aid Fixtures (IAFs) provided for C4ISR consoles, racks, and equipment for installation of support services and equipment.
- 400.1.7 Install waveguides.
- 400.1.8 The install the C4ISR LAN infrastructure (cables and connector assemblies).
- 400.2 Production Facility (PF). The Contractor shall establish a shore-based Production Facility (PF) to support the build-up, integration, and test of the C4ISR System prior to installation aboard the ship and provide a facility arrangement drawing. [400-04-2325]
- 400.2.1 The C4ISR PF shall accommodate two complete C4ISR systems.
- 400.2.2 The Contractor shall conduct C4ISR interface testing at the PF including testing with actual or simulated GFE.
- 400.2.3 The Contractor shall install C4ISR elements in the PF in such a way as to follow both the compartment and individual space arrangement drawings.
- 400.2.4 Equipment shall be located within a tolerance of .25 inches.
- 400.2.5 High visibility deck markings shall be used to illustrate bulkheads and interior obstructions that are not installed (such as stanchions) and equipment not required to be installed.
- 400.2.6 The C4ISR PF shall use the same raised deck design as the ship.
- 400.2.7 System elements which require antenna installations shall be installed in such a manner that operational use (radiation into free space) is possible. The Contractor shall provide electrical power, cooling water, heating, ventilation, air conditioning, security and fire protection necessary to operate the equipment within the facility.
- 400.2.8 The Contractor shall establish cableways and route C4ISR intra-compartment cables as they would be installed on the ship.
- 400.2.9 The C4ISR PF cabling shall be reused to support follow-on ship C4ISR system build-up, integration, and test.
- 400.2.10 The C4ISR PF shall be designed and certified to accomplish secure testing up to the highest level the C4ISR system will be certified.

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- 400.2.11 The C4ISR PF shall accommodate COMMUNICATIONS SECURITY (COMSEC) equipment receipt, storage, testing, and shipment in accordance with the COMSEC MATERIAL CONTROL SYSTEM (CMCS).
- 400.2.12 The Contractor shall conduct C4ISR interface and end-to-end testing at the C4ISR PF including testing with actual or simulated GFE.
- 400.2.13 The contractor shall simulate GFE that cannot be delivered to the C4ISR PF through the use of test sets or other means.
- 400.2.14 The Contractor shall install equipment installed in the PF on temporary foundations except when utilization of shipboard foundations or other structural members will expedite transition of the equipment or systems to the ship.
- 400.2.15 The Contractor shall accomplish preventive and corrective maintenance on equipment while installed in the PF.

**504 Instruments and Instrument Boards**

- 504.1 Calibration. The Contractor shall calibrate instruments and gauges before trials and again after trials but before ship delivery.
- 504.2 Calibration Report. The Contractor shall provide an Instrument and Gauge Calibration Report. [504-04-2033]

**549 Lubricants**

- 549.1 Lubricant Charts. The Contractor shall provide Lubrication Charts.[549-04-1788]
- 549.1.1 The Contractor shall provide Lubrication Charts for installed equipment.
- 549.1.2 The Contractor shall provide Lubrication Charts for portable equipment except where commercial technical publication literature supplied with the equipment addresses the lubrication requirements.
- The Contractor shall provide a copy of the literature to be stowed in the Hazardous Materials Stores and Issue Room (HAZMINCTR) for reference.

**STATEMENT OF WORK FOR CONSTRUCTION**

The Contractor shall include lubricant data on the applicable maintenance procedures, and in the Master Lubricant Database.

- 549.2 Lubrication Diagrams. The Contractor shall provide lubrication diagrams. [549-04-1788]
- 549.2.1 The Contractor shall provide complete lubrication diagrams for installed equipment, except that complete internal diagrams are not required for diesel engines.
- 549.2.2 The Contractor shall provide lubrication system drawings that identify total flow and minimum pressure requirements for diesel engines.

**630 Corrosion Prevention and Control**

- 630.1 Corrosion Prevention and Control Plan. The Contractor shall implement their Corrosion Prevention and Control Plan.

**702 Armament**

- 702.1 Ammunition. The Contractor shall provide support during the COT to demonstrate that ammunition can be safely handled and stowed in accordance with Weapons System Safety Plan and OP-4.

**EXHIBIT XX - FOR CONSTRUCTION****CONTRACT DATA REQUIREMENTS****General**

This Attachment includes the Data Item requirements for Phase I and Phase II. Phase I and Phase II form DD 1423 templates are provided as enclosures (1) and (2).

The definitions for Block 10 and Block 12 acronyms are in Tables 1 and 2.

Data Item Numbers: Data items are identified using the following 3-part approach:

- XXX: SWBS identifier for the item
- YY: Indicates the following Program Periods:
  - 01 - Phase I Preliminary and Contract Design
  - 03 - Phase II Detail Design
  - 04 - Phase II Construction
  - 05 - Life Cycle Engineering
- ZZZZ: Unique Sequence Number - Identifies a submittal.

There are no data delivery requirements associated with the General Statement of Work.

There is a separate group of submittals for each Program Period. Where submittals associated with different Program Periods have identical Sequence Numbers, the data requirements for later submittals are the same as for earlier submittals, except where noted. Where the Form DD 1423 does not provide specific additional data requirements for each submittal, the Contractor shall provide an update of the previous submittal.

Example:

A Phase I Preliminary and Contract Design submittal has a Data Item Number of 562-01-1820.

A Phase II Detail Design submittal has a Data Item Number of 562-03-1820.

The base data requirements for the Phase II Detail Design submittal are as specified in the Phase I Preliminary and Contract Design version of the 1423 with any additional requirements specified.

**DD 1423 Block information:**

Block 1 Data Item No.: See attached forms DD 1423.

Block 2 Title of Data Item: See attached forms DD 1423.

**EXHIBIT XX - FOR CONSTRUCTION**

Block 3 Subtitle: Not used.

Block 4 Authority: See attached forms DD 1423.

Block 5 Contract Reference: Not used. The Data Item Number provides the contract cross reference to the applicable section(s) of the SOW.

Block 6 Requiring Office: Not used.

Block 7 DD 250 Req: See Section C.

Block 8 Approval Code: During Phase I, deliverables are for Acceptance only. During Phase II, deliverables are for Acceptance, Approval, or Information as indicated in the 1423. These are defined as follows:

Acceptance: The USCG will provide a response that indicates acceptance, comments identifying non-compliance, or rejection.

Approval: The USCG will provide a response that indicates approval, comments identifying non-compliance, or disapproval. Where an item is required to be submitted for approval, it is intended that work shall not proceed until notification of approval is received. In the event the subject item is not approved, rationale will be provided and subject effort shall not proceed until such time as a satisfactory and mutually agreeable resolution has been resubmitted and approved.

Information: The USCG may provide comments.

Block 9 Distribution Statement: Not used.

Block 10 Frequency: See attached forms DD 1423. See Table 1.

Block 11 As of Date: Not used.

Block 12 Date of initial Submission: See attached forms DD 1423. See Table 2.

Block 13 Date of Subsequent Submission: See attached forms DD 1423. See Table 2.

Block 14 Distribution: Not used.

Block 15 Total: Not used.

Block 16: Remarks: See attached forms DD 1423.

## EXHIBIT XX - FOR CONSTRUCTION

Table 1	Submittal Codes: Frequency
Blank	In BLK 10, there are no periodic (e.g., monthly, quarterly, annually) submittals.
WKLY	Weekly
BI-WKLY	Bi-weekly (every other week)
MTHLY	Monthly
BI-MTHLY	Bi-monthly (every other month)
QTRLY	Quarterly
SEMI-ANNLY	Every six months
ANNLY	Annually
ASREQ	As required

Table 2	Submittal Codes: Initial / Subsequent Submittal
YYYY/MM/DD	Specific Year/Month/Day
RAR	ReSubmit As Required (use only for Phase II Approval CDRLs)
DAC	Days After Contract Award; i.e., 15 DAC (include the space)
DAOE	Days After Option Exercised
DAPAC	Days after Post Award Conference.
DARF	Days After Reporting Period
DPPMC1	Days Prior to Program Management Conference #1
DPPDR	Days Prior to Preliminary Design Review
DAPDR	Days After Preliminary Design Review
DPPMC3	Days Prior to Program Management Conference #3
DPKDR	Days Prior to Contract Design Review
DPKOM	Days Prior to Kick-off Meeting
DPIBR	Days Prior to IBR
DPICDR	Days Prior to Initial Critical Design Review
DAICDR	Days After Initial Critical Design Review
DPFCDR	Days Prior to Final Critical Design Review
DPPRR	Days Prior to Production Readiness Review
DAPRR	Days After Production Readiness Review
DPT	Days Prior to Test
DATC	Days After Test Complete
DPL/D	Days Prior to Launching / Docking

## EXHIBIT XX - FOR CONSTRUCTION

DPBT	Days Prior to Builders Trials
DPAT	Days Prior to Acceptance Trials
DAAT	Days After Acceptance Trials
DPD	Days Prior to Delivery
DAD	Days After Delivery

During Phase I, the Contractor shall incorporate responses to USCG comments in the next submittal of the deliverable, unless otherwise specified in the USCG response. During Phase II, the Contractor shall respond to USCG comments and resubmit deliverables updated in response to the comments within 30 days of receipt of the comments.

In subsequent submittals of a deliverable, the Contractor shall indicate on the cover page the version being submitted and include a change page that indicates changes to the paragraph level.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 042-04-1009

BLK02-TITLE OF DATA ITEM: Major Review Plans and Presentations

BLK04-AUTHORITY: DID Number: DI-ADMN-81308  
DID Title: Conference Report

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: 14 D prior to the Conference

BLK 13-DATE OF SUBS SUBM: 14 DARC

BLK16-REMARKS:

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 045-04-1078

BLK02-TITLE OF DATA ITEM: Care of Ship - Damage Incident Reports

BLK04-AUTHORITY: DID Number: Contractor Format  
(SEE BLK 16)  
DID Title:

BLK08-APP CODE:

BLK10-FREQUENCY: ASREQ

BLK12-DATE OF 1ST SUBM: See BLK16

BLK 13-DATE OF SUBS SUBM: See BLK16

BLK16-REMARKS:

BLK 04: The Care of Ship - Damage Incident Report shall be used to present the information concerning the grounding, damage, collision of the ship. Damage includes fire, flooding, structural failures and other major ship's system, machinery or equipment failures. This report is required for vessel damage, grounding, and collision which are both covered and not covered by insurance. The grounding/damage/collision may be investigated by a board of inquiry.

The Care of Ship - Damage Incident Report shall include the following:

- 1 A detailed reporting of any incident involving grounding, damage, collision, and injuries sustained by personnel on board the ship as a result of the incident.
- 2 All reports shall include photographic evidence of all reported damage.
- 3 All groundings or collisions reports shall contain as a minimum: the date and time, flood state, latitude and longitude of incident, sea state, weather conditions, ships and vessels in assistance, date time group of messages relative to incident, and witnesses to the incident. Diver's report, difficulties experienced in getting off shoal water, reasons for grounding, and extenuating circumstances shall be provided as applicable.
- 4 All damage incident reports shall contain as a minimum the date and time, location of incident, responding personnel and equipment, date time group of messages relative to the incident and witnesses. Corrective measures, damage control and personnel injured information shall be provided as applicable. Each detailed damage report shall include results of underwater damage (when appropriate), the reasons for the occurrence, and the impact on construction schedules.
- 5 All final reports shall include approved corrective action and recommendations if appropriate for changes or improvement to the Care of Ship During Construction Plan.

BLK12: Submit preliminary Care of Ship - Damage Incident Report(s) within 24 hours after occurrence.

BLK13: Submit detailed Care of Ship - Damage Incident Report(s) NLT 14 days after occurrence

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 045-04-1079

BLK02-TITLE OF DATA ITEM: Procedures for Launching, Docking, and Undocking

BLK04-AUTHORITY: DID Number: CGDI-MISC-90007,  
DID Title: Documentation,  
Launching

DID Number: CGDI-MISC-90013  
DID Title: Docking Procedures  
Documentation and Dockmaster  
Qualification

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: 45 DPL/D

BLK 13-DATE OF SUBS SUBM: 7 DPL/D

BLK16-REMARKS:

BLK4: DID CGDI-MISC-90007 delete paragraph 10.1,

BLK 4: DID CGDI-MISC-90013 delete paragraph 10.1

BLK 4: DID CGDI-MISC-90013 add to paragraph 10.2, Contractor shall use NSTM, S9086-7G-STM-010 for docking and undocking

BLK 12: Preliminary submission required 445 DPL/D = "Days Prior to Launching/Docking"

BLK 13: Final submission required 7 DPL/D

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 045-04-2215

BLK02-TITLE OF DATA ITEM: Care of Ship Report

BLK04-AUTHORITY: DID Number: Contractor Format  
DID Title:

BLK08-APP CODE:

BLK10-FREQUENCY: MTHLY

BLK12-DATE OF 1ST SUBM: See BLK 16

BLK 13-DATE OF SUBS SUBM: See BLK16

BLK16-REMARKS:

BLK 04:

The Care of Ship Report shall report monthly in the Contractor's format the efforts, actions and results of the Care of Ship During Construction Plan

BLK 12: 1<sup>st</sup> Submission of the Monthly Care of Ship Report occurs 15 Days after the first 30 day Reporting Period (RP) commencing with the receipt of material, machinery, equipment or spares for the OPC.

BLK 13: 15 DARP

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 045-04-2252

BLK02-TITLE OF DATA ITEM: Safety Certification for Drydock Facilities and  
Building WayBLK04-AUTHORITY: DID Number: Contractor Format  
DID Title:

BLK08-APP CODE: A

BLK10-FREQUENCY: ANNL

BLK12-DATE OF 1ST SUBM: 90 DPPRR

BLK 13-DATE OF SUBS SUBM:

BLK16-REMARKS:

BLK 13: Annual updates are required to ensure any changes in the configuration or material status of the shipyard's drydock facilities and/or building way and that existing certifications are current without specified limitations on operation or capacity which would impact the OPC.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 070-04-1066

BLK02-TITLE OF DATA ITEM: Booklet of Ship Certifications

BLK04-AUTHORITY: DID Number: DI-MISC-80678  
Data Report DID Title: Certification

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: 15DPD

BLK 13-DATE OF SUBS SUBM: 90 DAD

BLK16-REMARKS:

BLK 4: Paragraphs 10.1, 10.2, 10.2.1, 10.2.4, and 10.5 apply.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 083-04-2111

BLK02-TITLE OF DATA ITEM: Operating Space Items (OSI)/ Store Room Items  
(SRI) and General Use Consumable Lists (GUCL)BLK04-AUTHORITY: DID Number: DI-ILSS-80958  
DID Title: Integrated COSAL  
(I-COSAL) Data

BLK08-APP CODE: SEE BLK 16

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: CDD

BLK 13-DATE OF SUBS SUBM: SEE BLK 16

BLK16-REMARKS:

BLK 04: Modify the DID as follows:  
Delete Paragraph 10 and all associated sub paragraphs. Insert the following:  
10.1 General. The contractor shall prepare the listing in accordance with the OSI\_SRI-GUCL Listing template (2011-12-01\_OSI\_SRI\_GUCL\_LISTING\_TEMPLATE)

BLK08: Government review and approval for content, accuracy, and completeness. Allow 60 days for government review.

BLK13. Revisions shall be submitted within 30 days after approval of a change by the Government.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 083-04-1949

BLK02-TITLE OF DATA ITEM: Outfitting Material Status Report

BLK04-AUTHORITY: DID Number: DI-ILSS-80947  
DID Title: Outfitting Operations  
Plan

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: 45 DPCDR

BLK 13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Outfitting Material Status Reports shall be provided to the Coast Guard to monitor and track all onboard allowance material in accordance with MIL-STD-1339.

The Status Report shall include

- Substitutions, shortages, damages or other discrepancies.
- Summary statistics for the receipt of government-furnished and contractor-furnished OSI

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 083-04-2006

BLK02-TITLE OF DATA ITEM: Binned Material List

BLK04-AUTHORITY:

DID Number: DI-ILSS-80949

DID Title: Binned Material

List

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM:

45DPPAT

BLK 13-DATE OF SUBS SUBM:

30DPTD

BLK16-REMARKS:

BLK 04: Modify the DID as follows:  
Change 10.1 as follows:

"10.1 General. The binned material list shall be in Microsoft Office Format and be in the following sequences:

- a. NIIN sequence with part-numbered items in alphanumeric sequence at the end.
- b. Stowage location sequence.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 083-04-2348

BLK02-TITLE OF DATA ITEM: System Stock Status Report

BLK04-AUTHORITY: DID Number: DI-ILSS-80967  
DID Title: Spares Shipping  
Data Sheets

BLK08-APP CODE:

BLK10-FREQUENCY: See BLK 16

BLK12-DATE OF 1ST SUBM: See BLK 16

BLK 13-DATE OF SUBS SUBM: See BLK 16

BLK16-REMARKS:

BLK 04 Modify the DID as follows:  
Change 10. as follows:

"10.1 Format. The data sheets shall be submitted in a Microsoft Excel format and a non-editable portable document file (.pdf) format. Submittal of the spares shipment data shall be submitted as an enclosure to a letter of transmittal on contractor's company letterhead referencing the associated contract number and CLIN.

10.2 Content. The data sheets shall comply with the System Stock Documentation [2012-02-13\_ATCH\_APO\_SYSTEM\_STOCK\_DOCUMENTATION\_TEMPLATE]."

BLK 10: The Contractor may submit shipment data in increments that correspond to the content of each incremental buy list submission/resultant order as each order is definitized. If incremental submissions are made, each submission will be require a preliminary submittal subject to government review and comment and a final submittal following receipt of government comment.

BLK 12/13:

Preliminary - Preliminary spares shipment reports must be provided NLT 45 days before custody transfer to the Government (scheduled delivery). The Government will review and provide comments within 15 calendar days. The Contractor shall revise the preliminary submittal as required and then make the final submission.

Final - The Contractor shall submit a final submission of spares shipment reports for each incremental submission, as applicable, as an enclosure to a contracting officer letter within 15 calendar days of receipt of Government comments.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 084-04-1236

BLK02-TITLE OF DATA ITEM: Packaging, Handling, Storage & Transportation  
(PHS&T) Logistics Product Data (LPD) ReportBLK04-AUTHORITY:  
81758

DID Number: DI-SESS-

Data (LPD)

DID Title: Logistics Product

BLK08-APP CODE:

BLK10-FREQUENCY:

SEE BLK 16

BLK12-DATE OF 1ST SUBM:

SEE BLK 16

BLK 13-DATE OF SUBS SUBM:

SEE BLK 16

BLK16-REMARKS:

PHS&T LPD shall be provided per the most current version of MIL-STD-2073-1, for all designated system stock shipments. The data elements shall be provided as identified in The PHS&T LPD Guidance (2011-12-09\_ATCH\_PHS&T\_LPD.xls). DI-PACK-80120B Preservation Packing Data and DI-PACK-80121B Special Packaging Instructions (SPIs) are combined to allow a single report with additional data elements for SPIs as required by MIL-STD-2073-1.

BLK 10 & 12: Packaging Reports shall be submitted within 30 days of Government Approval of Recommended System Stockage Buy List. If new parts are added to System Stockage Buy List, the Contractor shall provide a packaging report for the additional component(s) within 21 days.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 084-04-2336

BLK02-TITLE OF DATA ITEM: Performance Oriented Packaging (POP) Test Report

BLK04-AUTHORITY:  
81059

DID Number: DI-PACK-

Oriented

DID Title: Performance

Packaging (POP) Test Report

BLK10-FREQUENCY:

SEE BLK 16

BLK12-DATE OF 1ST SUBM:

SEE BLK 16

BLK 13-DATE OF SUBS SUBM:

SEE BLK 16

BLK16-REMARKS:

BLK 10, 12 & 13 Reports shall be submitted within 30 days of Government Approval of Recommended System Stockage Buy List. If new parts are added to System Stockage Buy List, the Contractor shall provide an updated POP Test Report for the additional component(s) within 21 days.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 084-04-2337

BLK02-TITLE OF DATA ITEM: Container Design Retrieval System (CDRS) Search Request

BLK04-AUTHORITY:  
80683

DID Number: DI-PACK-

DID Title: Container  
Design Retrieval System  
(CDRS) Search Request

BLK08-APP CODE:

BLK10-FREQUENCY:

ASREQ

BLK12-DATE OF 1ST SUBM:

SEE BLK 16

BLK 13-DATE OF SUBS SUBM:

SEE BLK 16

BLK16-REMARKS:

BLK 10, 12 & 13 CDRS Search Requests shall be submitted within 30 days of Government Approval of Recommended System Stockage Buy List. If new parts are added to System Stockage Buy List, the Contractor shall provide an updated CDRS Search Request for the additional component(s) within 21 days.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 084-04-2338

BLK02-TITLE OF DATA ITEM: Container Design Retrieval System (CDRS) Data  
InputBLK04-AUTHORITY:  
80684

DID Number: DI-PACK-

DID Title: Container Design  
Retrieval System (CDRS) Data  
Input

BLK08-APP CODE:

BLK10-FREQUENCY:

ASREQ

BLK12-DATE OF 1ST SUBM:

SEE BLK 16

BLK13-DATE OF SUBS SUBM:

SEE BLK 16

BLK16-REMARKS:

BLK 10, 12 & 13: CDRS Data Input shall be submitted within 30 days of completion of container fabrication. If items parts are added to System Stockage Buy List, the Contractor shall provide an updated CDRS Data Input for the additional containers within 21 days of completion of the container fabrication.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1295

BLK02-TITLE OF DATA ITEM: Factory Training Program Report

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Date of 1<sup>st</sup> Submittal: Training to be completed within nine months prior to delivery of the lead cutter. Report due 30 days after factory training module completed.

The Contractor shall provide satisfactory written documentation and demonstration of non-COTS instructor competencies as required.

At the completion of Factory Training, the Contractor shall deliver a report detailing the actual date, time, and duration of each training session/lesson; the instructor(s) names; names of Coast Guard attendees; any deviations from the approved training design and content; and an explanation of any deviations. This report shall be due to the U.S. Coast Guard within 30 days of factory training completion.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1296

BLK02-TITLE OF DATA ITEM: Factory Training Analysis

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Date of 1<sup>st</sup> submittal: NLT 12 months after approval of the final Training Development Plan.

The Contractor shall conduct a task analysis of every operator and maintainer job associated with the Factory Training requirements in the Training Development Plan. The task analyses shall identify every task associated with operating and maintaining the system/equipment associated with Factory Training and provide rationale as to whether the tasks should be trained during Factory Training.

When available, the Contractor shall include U.S. Coast Guard Accomplished Performers (AP) and/or Subject Matter Experts (SME).

The contractor shall include a comprehensive written report of their analysis with discussion of tasks determined necessary for training. The results of this report shall be the topic of an outbrief provided to the U.S. Coast Guard within 12 months of the TDP's approval.

For guidance on conducting needs assessments and training analyses, the contractor shall use the U.S. Coast Guard Training System Standard Operating Procedures, <http://www.uscg.mil/forcecom/training/>.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1297

BLK02-TITLE OF DATA ITEM: Factory Training Design Document

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Date of 1<sup>st</sup> Submittal: NLT 6 months after approval of the Factory Training Analysis.

The document shall be a compilation of curriculum outlines for each training course, including all COTS training courses. The individual curriculum outlines shall include at a minimum:

- name of the training
- a mission statement
- scope of training
- prerequisites
- required rank/rate of students
- terminal performance objectives
- enabling objectives
- required staffing
- required training aids/equipment
- required references
- time estimation of classroom versus performance-based training (in hours).

Curriculum outline format, including all COTS training courses, shall be in accordance with the USCG provided example.

STATEMENT OF WORK FOR **CONSTRUCTION**

For guidance on developing curriculum outlines, the contractor shall use the U.S. Coast Guard Training System Standard Operating Procedures, <http://www.uscg.mil/forcecom/training/>.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1298

BLK02-TITLE OF DATA ITEM: Factory Training Evaluation

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Date of 1<sup>st</sup> Submittal: NLT 30 days after completion of each Factory Training Program Report.

For any knowledge objectives, Level 2 evaluations may be knowledge tests (e.g., paper test); however, for all performance or skill objectives, Level 2 evaluations shall be performance-based tests (i.e., performing actual objectives).

For guidance on developing training evaluation materials, the contractor shall use the U.S. Coast Guard Training System Standard Operating Procedures, <http://www.uscg.mil/forcecom/training/>.

The Contractor shall provide the results of the Level 2 evaluation results in a report detailing each student's performance on every Factory Training objective. For any students who do not achieve the required performance to pass the training objectives, the report shall explain this and detail any remedial actions taken to help the student pass.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1299

BLK02-TITLE OF DATA ITEM: Factory Training Materials

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM: See Block 16

BLK16-REMARKS and TAILORING:

Date of 1<sup>st</sup> Submittal: NLT 12 months after approval of the Factory Training Design Document.

Date of subsequent submittal: NLT 60 days prior to commencement of each hull's factory training.

Documentation shall include, but is not limited to:

- vessel drawings
- operations and technical manuals
- operator and maintainer procedures
- cutter information book
- job aids
- textbooks
- videos
- instructor guides
- student guides

The contractor shall update these products after each hull's factory training to incorporate feedback and lessons learned during the previous delivery and any additional training material provided by the U.S. Coast Guard. Only those modules/lessons that have been updated (with updates annotated or a summary of changes provided) need be submitted for review.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1300

BLK02-TITLE OF DATA ITEM: Factory Training Schedule

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM: See Block 16

BLK16-REMARKS:

Date of 1<sup>st</sup> Submittal: NLT six months prior to start of Factory Training.  
Date of subs submittal: NLT 60 days prior to the start of each hull's Factory Training.

The Factory Training Schedule shall detail the attendees, location, order, duration, and date relative to ship delivery for each Factory Training course/module/unit/lesson. The schedule shall be presented as a Gantt chart.

The contractor shall update these products after each hull's factory training to incorporate feedback and lessons learned during the previous delivery, any configuration changes to the ship, and any additional training material provided by the U.S. Coast Guard.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1301

BLK02-TITLE OF DATA ITEM: Familiarization Training Program Report

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports - Preparation,  
Presentation, and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Date of 1<sup>st</sup> submittal: Training to be completed within 75 calendar days prior to delivery of the lead ship. Report due 30 days after familiarization training module completed.

The Contractor shall provide satisfactory written documentation and demonstration of instructor competencies as required.

At the completion of Familiarization Training, the Contractor shall deliver a report detailing the actual date, time, and duration of each training event; the instructor(s) names; names of Coast Guard attendees; any deviations from the approved training design and content; and an explanation of any deviations. This report shall be due to the U.S. Coast Guard within 30 days of familiarization training completion.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1302

BLK02-TITLE OF DATA ITEM: Familiarization Training Design Document

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Date of 1<sup>st</sup> Submittal: NLT six months after approval of the Familiarization Training Analysis.

The Familiarization Training Design Document shall be a compilation of curriculum outlines for each course/module/unit/lesson. The individual curriculum outlines shall include at a minimum:

- name of the training lesson
- a mission statement
- scope of training
- estimated duration
- prerequisites
- required rank/rate of students
- terminal performance objectives
- enabling objectives
- required staffing
- required training aids/equipment
- required references
- estimated time of classroom versus performance-based training (in hours).

Curriculum outline format, including all COTS training courses, shall be in accordance with the USCG provided examples.

STATEMENT OF WORK FOR **CONSTRUCTION**

For guidance on developing curriculum outlines, the contractor shall use the U.S. Coast Guard Training System Standard Operating Procedures, <http://www.uscg.mil/forcecom/training/>.

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STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1303

BLK02-TITLE OF DATA ITEM: Familiarization Training Evaluation

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Date of 1<sup>st</sup> Submittal: NLT 30 days after completion of each Familiarization Training Report.

For any knowledge objectives, Level 2 evaluations may be knowledge tests (e.g., paper test); however, for all performance or skill objectives, Level 2 evaluations shall be performance-based tests (i.e., performing actual objectives).

For guidance on developing training materials, the contractor shall use the U.S. Coast Guard Training System Standard Operating Procedures, <http://www.uscg.mil/forcecom/training/>.

The Contractor shall provide the results of the Level 2 evaluation results in a report detailing each student's performance on every Familiarization Training objective. For any students who do not achieve the required performance to pass the training objectives, the report shall explain this and detail any remedial actions taken to help the student pass.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1304

BLK02-TITLE OF DATA ITEM: Familiarization Training Materials

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM: See Block 16

BLK16-REMARKS:

Date of 1<sup>st</sup> Submittal: NLT 15 months after approval of the Familiarization Training Design Document.

Date of Subs Submittal: NLT 60 days prior to commencement of each hull's familiarization training.

Documentation shall include, but is not limited to:

- vessel drawings
- operations and technical manuals
- operator and maintainer procedures
- cutter information book
- job aids
- textbooks
- videos
- instructor guides
- student guides

The contractor shall update these products after each hull's familiarization training to incorporate feedback and lessons learned during the previous delivery and any additional training material provided by the U.S. Coast Guard. Only those modules/lessons that have been updated (with updates annotated or a summary of changes provided) need be submitted for review.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1305

BLK02-TITLE OF DATA ITEM: Familiarization Training Schedule

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM: See Block 16

BLK16-REMARKS:

Date of 1<sup>st</sup> Submittal: NLT six months prior to start of Familiarization Training.

Date of subs submittal: NLT 60 days prior to the start of each hull's Familiarization Training.

The Familiarization Training Schedule shall detail the attendees, location, order, duration, and date relative to cutter delivery for each Familiarization Training course/module/unit/lesson. The schedule shall be presented as a Gantt chart.

The contractor shall update these products after each hull's familiarization training to incorporate feedback and lessons learned during the previous delivery, any configuration changes to the ship, and any additional training material provided by the U.S. Coast Guard.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-1306

BLK02-TITLE OF DATA ITEM: Onboard and Embedded Training Market Research Report

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and Technical Reports - Preparation, Presentation, and Preservation

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: 15 DPICDR

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 088-04-2045

BLK02-TITLE OF DATA ITEM: Familiarization Training Analysis

BLK04-AUTHORITY: DID Number: ANSI-Z39.18  
DID Title: Scientific and  
Technical Reports -  
Preparation, Presentation,  
and Preservation

BLK08-APP CODE: A

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: See Block 16

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Date of 1<sup>st</sup> Submittal: NLT 12 months after approval of the final Training Development Plan .

The Contractor shall conduct a task analysis of every operator and maintainer job associated with the Familiarization Training requirements in the Training Development Plan . The task analysis shall identify every task associated with operating and maintaining the system/equipment associated with the Familiarization Training and provide rationale as to whether the tasks should be trained during Familiarization Training.

When available, the Contractor shall include U.S. Coast Guard Accomplished Performers (AP) and/or Subject Matter Experts (SME).

The contractor shall include a comprehensive written report of their analysis with discussion of tasks determined necessary for training. The results of this report shall be the topic of an outbrief provided to the U.S. Coast Guard within 12 months of the TDP's approval.

For guidance on conducting needs assessments and training analyses, the contractor shall use the U.S. Coast Guard Training System Standard Operating Procedures, <http://www.uscg.mil/forcecom/training/>.

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 099-04-1375

BLK02-TITLE OF DATA ITEM: Photographs and Videos

BLK04-AUTHORITY: DID Number: Contractor format  
DID Title:

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM:

BLK 13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Digital photographs and videos shall contain the image identification information specified in the SOW. Physical media such as portable data storage devices, CDs, and DVDs shall have summary information marked on the exterior of the media. Digital photographs shall be identified by a unique file name required identification information shall be recorded and indexed on the same media containing the images. Videos shall contain the required identification information recorded as part of the lead in for each video record and be High Definition (HD 1080p). Digital photographs shall be color images with a resolution of 12 megapixels or greater, suitable for generating clear, sharp, 8x10 prints.

Photo for Start Fab

Photo for Keel Laying

Video for Keel Lay

Photo for 20% of Mfg

Photo for 40% of Mfg

Photo for 60% of Mfg

Photo for 70% of Mfg

Photo for 80% of Mfg

Photo for 90% of Mfg

Photo for 100% of Mfg

Photo for Launch

Video for Launch

Photo for Christening

STATEMENT OF WORK FOR **CONSTRUCTION**

Video for Christening

Photo for ID Photo Set & Sea Trials

Video for ID Photo Set & Sea Trials

Video for Sea Trials

Photo for Incline Exp.

Video for Incline Exp.

Photo for Commission

Video for Commission

Photo(s) for completion including interior spaces and exterior views.

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STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 400-04-2325

BLK02-TITLE OF DATA ITEM: Production Facility Arrangement Drawing

BLK04-AUTHORITY: DID Number: DI-SESS-81000  
DID Title: Product Drawings/Models  
and Associated Lists

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: 60 DAOE

BLK 13-DATE OF SUBS SUBM: 30DPD

BLK16-REMARKS:

BLK04: Drawing shall be drawn to scales of not less than 1/4 inch to the foot.

DRAFT

STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 504-04-2033

BLK02-TITLE OF DATA ITEM: Instrument and Gauge Calibration Report

BLK04-AUTHORITY: DID Number: DI-MISC-80652  
DID Title: Technical Information  
Report

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM: 10 DPAT

BLK 13-DATE OF SUBS SUBM: CDD

BLK16-REMARKS:

BLK16: The Instrument and Gauge Calibration Report shall list all instruments and gauges that have been calibrated. The Report shall list the test conditions (pressure, temperature, etc.), the initial reading of the gauge or instrument, and the correction to calibrate the gauge or instrument, if any. The date and time that each instrument and gauge was calibrated shall also be included.

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STATEMENT OF WORK FOR **CONSTRUCTION**

BLK01-SEQUENCE NO.: 549-04-1788

BLK02-TITLE OF DATA ITEM: Lubricants Database Report, Charts and Diagrams

BLK04-AUTHORITY: DID Number: Contractor Format  
DID Title:

BLK08-APP CODE:

BLK10-FREQUENCY:

BLK12-DATE OF 1ST SUBM:

BLK13-DATE OF SUBS SUBM:

BLK16-REMARKS:

Lubrication Charts for portable equipment may consist of the commercial technical publication literature supplied with the equipment if the literature addresses the lubrication requirements.

Lubrication Charts shall provide lubricant data on the applicable maintenance procedures.

Lubrication Diagrams for diesel engines are not required to include complete internal diagrams.

Lubrication Diagrams shall provide lubrication system drawings that identify total flow and minimum pressure requirements for diesel engines.