

PATROL/INTERCEPTOR VESSEL PROCUREMENT – RBR COAST GUARD – RBRCG2026

(ANNEX E) - MISSION EQUIPMENT REQUIREMENTS – (BOTH INTERCEPTOR & PATROL)

SECTION 1 - MISSION EQUIPMENT

1.1 General Mission Equipment Requirements

1.1.1 All mission equipment shall be marine-grade, corrosion-resistant, and suitable for continuous exposure to saltwater and UV.

1.1.2 Equipment shall be installed or stowed in such a way that it does not impede crew movement, visibility, or operations.

1.1.3 All equipment shall be secured to withstand shock loads during high-speed transit and heavy sea states.

1.1.4 Where applicable, mission equipment shall be permanently mounted or secured using quick-release mounts for rapid deployment.

1.2 Required Mission Equipment (Proponent Supplied and Installed)

1.2.1 EPIRB & PLBs

- a. One (1) Category I EPIRB with hydrostatic release,
- b. Four (4) Personal Locator Beacons (PLBs) for crew use.

1.2.2 Dive First Aid Kit

- a. One (1) Dive 1st Aid Commercial Diver Kit (SKU: FAK451) Commercial Diver Kit with O2 and AED | Dive 1st Aid,
- b. Proponent shall supply and install mounting bracket.

1.2.3 Life Raft

- a. One (1) six (6)-person SOLAS-approved, throw-overboard life raft in a rigid canister, with SOLAS B (or better, +24 hr) pack,
- b. A deck cradle with a hydrostatic release unit.

1.2.4 Search & Rescue Gear

- a. Life ring,
- b. Heaving lines,
- c. Recovery sling / Jason's Cradle equivalent with vessel attachment points.

1.2.5 Law Enforcement Gear

- a. Weapons locker capable of securing four (4) HK G36C rifles,
- b. Locker shall be lockable, weather-resistant, and mounted securely with rack to avoid weapon damage.

1.2.6 Communications Equipment Installation

- a. Two (2) VHF radios,
- b. One (1) SSB radio,
- c. One (1) Ground Support Airband Radio,
- d. Two (2) Sepura base stations w/ two (2) UHF/GPS antennas (Owner supplied)

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- e. Proponent shall mount and integrate owner-supplied items.

1.2.7 Stretcher Storage

Proponent shall provide dedicated storage for the owner-supplied CQC Fibrelight Maritime Rod Stretcher, [fibrelight-rod-stretcher.pdf](#) including:

- a. Quick-access bracket,
- b. Weather-protected location,
- c. Secure retention for high-speed operations.

1.3 Deck Equipment

1.3.1 Heavy-duty cleats shall be installed for towing and mooring.

1.3.2 The Vessel shall be equipped with a reinforced bow and aft tow post engineered for multi-role operational use, including towing, recovery operations, and integration of force-protection weaponry.

1.3.3 The bow and aft post shall be constructed of marine-grade aluminium or stainless steel, fully welded or mechanically fastened to structural deck reinforcements in accordance with ISO 12215.

1.3.4 The aft tow post shall be designed to safely withstand dynamic towing loads consistent with the Vessel's rated displacement and operational profile.

1.3.5 The bow and aft tow post shall incorporate a modular weapons mounting interface capable of accepting an M240 (or NATO-equivalent 7.62 mm) pintle-mount assembly.

1.3.6 The mounting interface shall allow:

- a. Secure attachment of a standard M240 (or NATO-equivalent 7.62 mm) pintle and cradle,
- b. 360° traverse or sector-limited traverse (as applicable),
- c. Quick installation and removal,
- d. Vibration resistance suitable for high-speed operations.

1.3.7 The weapons-capable tow post shall not interfere with:

- a. Engine tilt angles,
- b. Aft deck operations,
- c. Launch and recovery of rescue equipment.

1.3.8 The Proponent shall ensure that the post and deck structure meet appropriate structural loading criteria to support both towing loads and small-calibre weapons recoil forces.

1.4 Blue Emergency Lighting System

1.4.1 The Vessel shall be equipped with a marine-grade blue emergency lighting system suitable for law-enforcement and coast guard operations.

1.4.2 The Proponent shall supply and install:

- a. One (1) low-profile blue LED light bar, mounted on the T-top or superstructure,

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- b. The light bar shall be:
 - i. Fully waterproof (IP6 or higher),
 - ii. Shock and vibration resistant,
 - iii. Visible through 360 degrees,
 - iv. Capable of multiple flash patterns selectable from the helm,
 - v. The light bar shall not obstruct radar, FLIR, or antenna operation.

1.4.3 The Vessel shall be fitted with dedicated blue LED emergency lights positioned:

- a. Forward, aft, port, and starboard side,
- b. These lights shall:
 - i. Provide high-visibility identification during law-enforcement operations,
 - ii. Be integrated into the Vessel's blue LED light bar electrical system with circuit protection,
 - iii. Not interfere with COLREGS-required navigation lights.

1.4.4 All blue emergency lighting shall:

- a. Be controlled from a dedicated helm switch panel,
- b. Be labelled clearly for night and high-stress operations.

SECTION 2 - SAFETY SYSTEMS

2.1 General Safety Requirements

2.1.1 All safety systems shall comply with ISO, ABYC, SOLAS (where applicable), and Bermuda maritime safety standards.

2.1.2 Safety equipment shall be positioned for rapid access during emergencies.

2.1.3 All safety equipment shall be marine-grade and suitable for long-term saltwater exposure.

2.2 Bilge and Drainage Systems

2.2.1 The Vessel shall include multiple Rule automatic electric bilge pumps sized to the compartment volume.

2.2.2 Each bilge pump shall include:

- a. Automatic float switch wired on a separate fused circuit directly to the house battery bank,
- b. Manual override switch at helm,
- c. Indicator lights and alarms.

2.2.3 Bilge pump circuits shall be isolated and fused.

2.2.4 The deck shall be self-bailing and must not rely solely on bilge pumps for drainage.

2.3 Fire Safety

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2.3.1 The Vessel shall be equipped with multiple rated ABC portable fire extinguishers in accordance with SOLAS/FPA requirements.

2.3.2 Extinguishers shall be:

- a. Marine-rated,
- b. Easily accessible,
- c. Mounted in secure brackets.

2.4 Emergency Egress and Lighting

2.4. Critical areas including helm, console, and electrical spaces shall have emergency lighting capable of operation during loss of main power.

2.5 Personal Protective Equipment (PPE) Storage

2.5.1 Dedicated storage shall be provided for eight (8) Type 2 Life jackets

2.5.2 Storage shall be weather-resistant, ventilated, and positioned for rapid access during deployment.

2.6 Man Overboard (MOB) Systems

2.6.1 The Vessel shall include at minimum:

- a. MOB recovery sling,
- b. Throwable flotation devices,
- c. Dedicated SAR cut-outs in collar system.

2.7 First Aid & Medical Provisions

2.7.1 The Vessel shall include a mounted/secured Dive 1st Aid Commercial Diver Kit with O₂ and AED (SKU: FAK451).

2.7.2 The system shall be installed in a readily accessible location, protected from weather, and secured for high-speed operation.

2.8 Life Rafts

2.8.1 The Vessel shall carry one (1) six (6)-person SOLAS-approved, throw-overboard life raft in a rigid canister, with SOLAS B (or better, +24 hr) pack.

2.8.2 The life raft shall be secured in a deck mounted cradle using an approved Hydrostatic Release Unit (HRU) that enables automatic float-free release in the event of the Vessel sinking.

2.8.3 The HRU shall comply with SOLAS requirements and shall be installed per manufacturer specifications.

2.8.4 Life raft installations shall allow rapid manual deployment by two crew members.

2.8.5 Mounting systems shall not obstruct deck movement, visibility, or SAR operations.

SECTION 3 - COMMUNICATIONS SYSTEMS

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3.1 General Communications Requirements

3.1.1 The Vessel shall be equipped with a redundant, multi-layer communications suite to support RBRCG operational requirements, including SAR, law enforcement, and maritime patrol operations.

3.1.2 All communications equipment shall be marine-rated, waterproof, and integrated into the Vessel's electrical and antenna systems.

3.1.3 All radios shall be installed with proper grounding, antenna placement, and RF isolation to prevent interference.

3.2 VHF Marine Radios

3.2.1 Proponent shall supply and install two (2) VHF marine radios.

3.2.2 Each radio shall have:

- a. Independent antenna,
- b. Dedicated circuit protection,
- c. Helm-mounted controls,
- d. External speaker.

3.2.3 Radios shall be networked (where supported) to share GPS and AIS data with MFDs.

3.3 SSB Radio

3.3.1 Proponent shall supply and install one (1) Single Side Band (SSB) radio for long-range communications.

3.3.2 The installation shall include:

- a. Proper grounding system,
- b. Tuner unit,
- c. High-performance antenna system.

3.3.3 SSB radio shall be mounted where accessible and protected from water ingress.

3.3.4 The SSB antenna shall be positioned and installed such that it does not interfere with vessel operations, including crew movement, boarding activities, weapon arcs, navigation visibility, radar performance, or other antenna systems.

3.3.5 Antenna placement shall ensure adequate RF separation from other communication and navigation antennas to prevent electromagnetic interference.

3.3.6 The final antenna location shall be subject to RBRCG approval prior to installation.

3.4 UHF Communications System (Owner-Supplied)

3.4.1 Proponent responsibilities:

3.4.2 Proponent shall install and integrate:

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- a. Two (2) owner-supplied Sepura SCG22 base station with Sepura Colour Console 3 (SCC3) IP67,
- b. Two (2) owner-supplied Sepura UHF/GPS antennas.

3.4.3 Proponent shall provide:

- a. Mounting brackets,
- b. Cable routing,
- c. Power integration,
- d. External speaker.

3.4.4 Installation shall not interfere with other RF-dependent systems.

3.5 Air-Surface Communications Capability

3.5.1 Airband Communications

3.5.2 The Vessel shall be capable of direct air-surface voice communications to support coordination with airborne assets during maritime patrol, search and rescue (SAR), law-enforcement, and emergency response operations.

3.5.3 The communications suite shall support aeronautical VHF (Airband) frequencies appropriate for coordination with fixed-wing and rotary-wing aircraft operating in the maritime environment.

3.5.4 Air-surface communications capability shall be fully integrated with the Vessel's overall communications architecture and shall be operable from the primary helm position.

3.6 Antenna Systems

3.6.1 The Vessel shall include dedicated antennas for:

- a. VHF,
- b. UHF,
- c. AIS,
- d. GPS,
- e. SSB,
- f. AIRBAND,
- g. Sat Comm.

3.6.2 All antennas shall be mounted at optimal heights to prevent signal obstruction.

3.7 Auxiliary Communications

3.7.1 A loudhailer/PA system shall be integrated.

3.7.2 All communication system components shall be labelled and accessible for service.

3.8 Satellite Broadband System

3.8.1 The Proponent shall supply and install a satellite internet system (SIS) suitable for marine operational use.

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3.8.2 The SIS shall provide:

- a. High-bandwidth, low-latency satellite broadband suitable for maritime law enforcement and SAR operations,
- b. Automatic satellite tracking with no manual alignment required,
- c. Reliable connectivity in nearshore and offshore environments,
- d. Multi-device Wi-Fi capability and direct Ethernet output to vessel network systems.

3.8.3 The Proponent shall install the Starlink with:

- a. Flat, high-performance antenna mounted with unobstructed sky view,
- b. Marine-grade mounting hardware,
- c. Routed and protected cabling suitable for saltwater environments,
- d. Network integration to allow use with onboard systems including mission tablets, and communications servers.

3.8.4 System installation shall not interfere with radar, FLIR, AIS, VHF, SSB, AIRBAND, GPS, or other RF-sensitive systems. Proponent shall ensure proper grounding and RF isolation.

3.8.5 The Proponent shall activate and test the SIS service during FAT (Sea Acceptance Trials) and demonstrate:

- a. Stable connectivity underway at operational speeds,
- b. Minimum performance equivalent to SIS's listed maritime throughput,
- c. System restart and failover procedures.

3.9 Digital Intercom System

3.9.1 The Proponent shall supply and install a multifunctional, flexible, digital marine-grade intercom system capable of supporting six (6) crew headsets.

3.9.2 The intercom system shall be specifically designed for high-speed patrol and law-enforcement vessels and shall provide clear, hands-free communication in high-noise environments.

3.9.3 Minimum system requirements shall include:

- a. Six (6) crew headsets with noise-attenuating microphones,
- b. Full-duplex (simultaneous talk/listen) capability,
- c. Individual volume control per headset,
- d. Digital signal processing for noise reduction,
- e. Marine grade, waterproof control modules.

3.9.4 The system shall allow selective channelling and grouping, enabling the operator to isolate communications between helm, navigator, aft crew, and boarding teams as required.

3.9.5 The intercom shall be capable of integration with vessel radio systems, allowing selected headsets to interface with VHF and UHF communications where operationally required.

3.9.6 All components shall be securely mounted, vibration-resistant, and positioned to avoid interference with vessel operations, crew movement, or safety equipment.

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3.10 Ruggedized Mission Tablet

3.10.1 The Proponent shall supply and install one (1) fully rugged tablet (Tablet) computer for mission planning, command and control, and tactical operations.

3.10.2 The Tablet shall, at minimum:

- a. Be fully rugged and MIL-STD-810 compliant,
- b. Be certified to IP66 or higher,
- c. Include a sunlight-readable display suitable for maritime operations,
- d. Support GPS and wireless connectivity (Wi-Fi / Bluetooth),
- e. Operate on both internal battery power and vessel DC power.

3.10.3 The Proponent shall provide:

- a. A secure mounting dock suitable for marine use,
- b. Power integration with vessel electrical system,
- c. Cabling routed to avoid snag hazards and interference.

3.10.4 The mounting location shall allow rapid removal of the Tablet for mobile use while ensuring secure retention during high-speed operations.