

# REQUEST FOR INFORMATION

## VICEPRESIDENCY OF TRANSIT BUSSINES

### 1.0 Description

1.1 The Vice-presidency of Transits Business (NT) of the Panama Canal Authority (ACP) in effort to seek maximum safety for it's workers while maintaining the strict maintenance schedule of the water is seeking information on an Underwater Remotely Operated Vehicle (ROV) system capable of carrying out underwater inspections of structures, ships and terrain thru the use of cameras for good visibility conditions and SONAR where visibility is less than optimal

1.2 THIS IS A REQUEST FOR INFORMATION (RFI) ONLY. This RFI is issued solely for information and planning purposes – it does not constitute a Request for Proposal (RFP) or a promise to issue an RFP in the future. This request for information does not commit the ACP to purchase any supply or service whatsoever. Further, the ACP is not at this time seeking proposals and will not accept unsolicited proposals. Responders are advised that the ACP will not pay for any information or administrative costs incurred in response to this RFI; all costs associated with responding to this RFI will be solely at the interested party's expense. Not responding to this RFI does not preclude participation in any future RFP, if any is issued. If a solicitation is released, it will be synopsisized on the ACP's Website [Procurement and Sales page](#) It is the responsibility of the potential offerors to monitor these sites for additional information pertaining to this requirement.

### 2.0 Background

The ACP in the Vice-presidency of Transit Business currently has a total of 4 ROV's. These vehicles have reached their end of life period and need to be replaced. We are currently looking to replace the 4 units with two newer more capable units and a possible third unit.

2.1 Planned Start Date of Bid Process: Late October to early November 2019

2.2 Delivery Period: 45 days

2.3 Limitations: Must comply with ACP regulations and panamanian laws

2.4 Security Requirements: ?

### 3.0 Requested Information

The NT is looking for an ROV model with the following characteristics

#### Operating conditions:

The Panama Canal area is a diverse water environment contains Tropical Fresh Water and tropical Sea water, as well as a mix of Fresh water with Tropical Sea water the ROV must be able to work and perform in all water densities; without the need of a major structural to the body or carriage, at the most a simple calibration or value adjustments in the navigation and control software.

The water visibility it is also very diverse it can go from good horizontal visibility (30 feet or more) to almost zero (Less than 1 foot) in addition the water can contain suspended solids (sediments) where the measures can range from 1 NTU up to 500 NTU's)

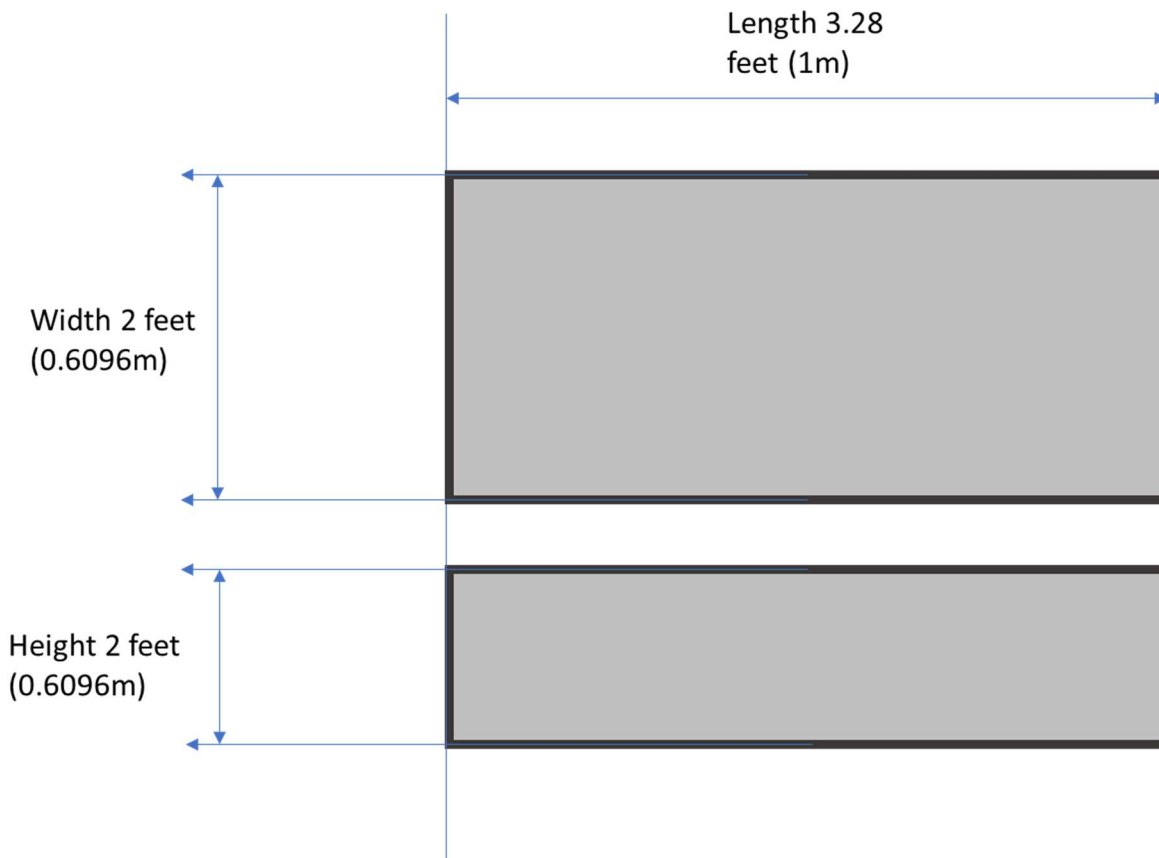
Currents in the area can also range from zero to about 5 knots, the ROV should be able to navigate and maneuver and maintain position in these currents.

The ROV and systems should be able to work well from a portable power source because some of the areas of work are outside of the power grid.

#### Physical requirements or Constraints:

The maximum number of personnel needed to launch the vehicle should be two (2) therefore the weight of the vehicle must not exceed 70 lbs. It should be configured in such manner that it allows for the launching of the vehicle over the side of from a small boat, craft or ship, pier or similar installation, as well the banks of a river or channel.

The preferred dimensions for ROV are as follows:



The controls, reels, and other related equipment needed for the operation of the ROV should be fitted in an enclosed case where it should operate from without the need to be taken out, also it must be waterproof, Panama is a tropical climate and it changes rapidly from sunny to thunderstorm in a matter of minutes, surrounded by two oceans therefore components must be weatherized and corrosion resistant.

**Hardware requirements:**

Thrusters must be installed in a multi axis configuration a minimum of 6 thrusters is required.

Hi resolution imaging sonar (HRIS) is required, the main task of the ROV to carry out inspections of underwater structures, ships, boats, diverse types of vessels and floating equipment, also the possibility of it being used for search and rescue operations under difficult and/or zero visibility environment.

A tilting mount for the HRIS would be an advantage but it is not required if ROV is able to tilt and hold position in the desired direction.

A secondary multibeam sonar for navigation or large area search operations might be required or at least the option of integrating one into the drone.

The ROV must include DVL or USBL system for positioning and tracking must be integrated into the navigation software.

The drone must have expansion capabilities, such as a robotic arm, or a thickness gauge and other accessories.

A list of available accessories must be included in this RFI this includes but it is not limited to Grabber or Robotic arm, thickness gauge, cleaning lance, and other commonly used attachments.

Minimum of one HD (4k) Camera mounted with PTZ capabilities, it must be able to record video and take pictures, the data can be stored on the ROV but it must be accessible from the control console, the camera can be used for navigation and for inspection.

A system to attach additional buoyancy devices or a way to increase buoyancy, would be a added value to the proposition since we currently have equipment and devices that we would might want to deploy on and ROV instead of the current vehicle due to constrains in the area of operation, some of these include: Multibeam Echosounders, Echosopes, and Scanning Sonars

## Software requirements

The ROV must include software for piloting and underwater navigation, that must be able to save, and payback missions, also it must allow for mission to be uploaded into the system (via USB at the very minimum) and be executed.

We prefer to have two dedicated stations one where all required information of piloting the vehicle is displayed and another station where inspection cameras, and sonar info can be displayed so that a second operator can assist with the inspection data while one operator takes care of the drone piloting and positioning

Sonar data viewing and control software must also be included and integrated into the consoles, if two different sonar are used for navigation and inspection, we would expect the inspection information to be displayed on the second monitor, whole navigation on the primary display.

The software must also be able to capture images, videos and data from sonar to be exported to other systems in the case of DVL or USBL integrate this data so we can rapidly determine the position and recorded for future reference or use.

#### **4.0 Responses**

4.1 Interested parties are requested to respond to this RFI with a white paper.

4.2 Papers in Microsoft Word for Office 2007 or Adobe Acrobat 8.0 compatible format are **due no later than 30th September 2019 23:00 EST**. Responses shall be submitted via e-mail to Zarik A. Rodriguez email [Zrodriguez@pancanal.com](mailto:Zrodriguez@pancanal.com) Proprietary information, if any, should be minimized and **MUST BE CLEARLY MARKED**.

4.3. Section 1 of the white paper shall provide administrative information, and shall include the following as a minimum:

4.3.1. Name, mailing address, overnight delivery address (if different from mailing address), phone number, fax number, and e-mail of designated point of contact.

#### **6.0 Questions**

Questions regarding this announcement shall be submitted in writing by e-mail point of contact

#### **7.0 Summary**

THIS IS A REQUEST FOR INFORMATION (RFI) ONLY to identify sources that can provide [FILL IN TITLE OF REQUIREMENT]. The information provided in the RFI is subject to change and is not binding. The Panama Canal has not made a commitment to procure any of the items discussed, and release of this RFI should not be construed as such a commitment or as authorization to incur cost for which reimbursement would be required or sought. Submissions will not be returned.