

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
**Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada**
Pacific Region
401 - 1230 Government Street
Victoria, B.C.
V8W 3X4
Bid Fax: (250) 363-3344

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet Fab & Del 5.8-5.99m Alum Jet Boat	
Solicitation No. - N° de l'invitation F7047-150016/A	Date 2015-08-25
Client Reference No. - N° de référence du client F7047-150016	
GETS Reference No. - N° de référence de SEAG PW-\$XLV-166-6798	
File No. - N° de dossier XLV-5-38088 (166)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2015-10-05	Time Zone Fuseau horaire Pacific Daylight Saving Time PDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Castle, David G.	Buyer Id - Id de l'acheteur xlvl66
Telephone No. - N° de téléphone (604) 363-0110 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: FISHERIES AND OCEANS CANADA SEE HEREIN	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Public Works and Government Services Canada - Pacific
Region
401 - 1230 Government Street
Victoria, B. C.
V8W 3X4

Delivery Required - Livraison exigée See Herein	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

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Buyer ID - Id de l'acheteur

xlv166

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REQUEST FOR PROPOSALS (RFP): Fabrication and Delivery of 5.8 M to 5.99M Aluminium jet boat with centre stand up console and trailer for the Department of Fisheries and Oceans.

PART 1 - GENERAL INFORMATION

1.1 Security Requirements

There is no security requirement associated with this bid solicitation.

1.2 Statement of Work

The Department of Fisheries and Oceans has a requirement to purchase one (1), 5.8 to 5.99 M aluminum jet boat with centre stand up console and trailer in accordance with the Technical Statement of Requirement- (TSOR) Annex A. and inspection as per Annex C- Inspection/Quality Assurance /Quality Control. All deliverable are to be delivered on or before November 20, 2015.

1.3 Debriefings

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

1.4 Trade Agreements

"This requirement is subject to the provisions of the Agreement on Internal Trade (AIT), the World Trade Organization - Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), the Canada - Chile Free Trade Agreement, the Canada - Peru Free Trade Agreement and the Canada - Panama Free Trade Agreement."

PART 2 - BIDDER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manua> l) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The 2003 (2015-07-03) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

2.1.1 SACC Manual Clauses

B3000T, 2006-06-16, Equivalent Products
A9125T, 2007-05-25, Valid Labour Agreement

2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

Due to the nature of the bid solicitation, bids transmitted by facsimile to PWGSC will not be accepted.

2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than 4 calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

2.4 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in **British Columbia**.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.

2.5 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least five (5) working days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

Canada requests that bidders provide their bid in separately bound sections as follows:

- Section I: Technical Bid (two hard copies and one soft copy on USB memory stick.)
Section II: Financial Bid (one hard copy and one soft copy on USB memory stick.)
Section III: Certifications (one hard copy and one soft copy on USB memory stick.)

Note: Bids in digital format (the soft copies) can be provided on the same USB memory stick.

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- (a) use 8.5 x 11 inch (216mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>).

To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

3.2 Section I - Technical Bid

In their technical bid, bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability in a thorough, concise and clear manner for carrying out the work.

In order to demonstrate their capabilities, the bidders must use the **ANNEX –H - BIDDER'S RFP REPLY AND EVALUATION PLAN, using column B ONLY** in replying to the RFP.

The technical bid must demonstrate that the proposed crafts will be mechanically sound, completely seaworthy, and operable and fit in all respects for the purposes intended.

3.2.1 Bidder's Check List and Technical Confirmation

The Bidders must submit a fully completed Annex **G - BIDDERS' BID PACKAGE CHECK LIST** as part of their Technical Bid.

3.2.2 Inspection and Test Plan (ITP)

1. Bidders must provide with their bid the inspection plan and testing procedures that will be used to verify, test and inspect all of the components and systems on the boat from initial construction to completion. The ITP must be in accordance with **Annex C** attached to this RFP.
2. Bidders must outline the process by which they will address and solve problems or delays with the fabrication, various installations, testing and delivery of the boat.

3.2.3 Drawings and Other Documentation

Prescribed drawings format and documentation to be provided with the bid:

- A general arrangement.
- Structural Drawings showing Deck Plan, a Centerline profile.
- A detailed Lines Plan.
- A drawing of the fuel supply arrangement.
- A drawing of bilge pumping system
- Electrical one-line diagram.
- The lightship weight.
- Draft Stability Calculation of the proposed vessel
- A Project Plan (written description) of how the Bidder/Contractor will comply with the TSOR. The written description must address each main element of the TSOR and indicate how the Bidder/Contractor will comply with the intent of the TSOR and successfully deliver the vessel(s) to the performance standard(s) identified.
- A Preliminary Production Schedule which must verify the Bidder/Contractor's ability to deliver the vessel(s) in accordance with the requirements of the Solicitation.

3.2.4 Subcontractors

As part of their Technical Bid, Bidders must submit a completed Annex **E Subcontractor List**.

3.2.5 Vessel Construction Experience

The Bidder must provide objective evidence of experience in the construction of vessels of the size, type and complexity which are the subject of this RFP. To demonstrate this experience, the Bidder must provide

- (a) detailed list of such vessels built pursuant to TP 1332, Construction Standards for Small Vessels, Non-pleasure craft latest edition, within the last 5 years;
- (b) photographs of vessels of listed;
- (c) (for listed TP 1332, non-pleasure craft sold within the last 5 years only) purchaser's name and contact information, and the date of sale.

The Bidder must also provide details on how the materials and equipment used in the construction, manufacture of the proposed vessel is suited to the operating and environmental conditions that the vessel may encounter.

3.2.6 Naval Engineering Capability

The Bidder must provide objective evidence that it has either in-house capabilities, or has a written commitment for the duration of the Contract from a qualified sub-contractor to provide marine drafting and engineering services. Qualified sub-contractor is defined as having the provided these services on similar vessel construction projects (same size, type and complexity).

3.2.7 Contractor's Quality Management System

1. The Bidder must provide objective evidence that it has a Quality Assurance Program, which must be in place during the performance of the Work, and which addresses the quality control elements below.
2. The objective evidence may be in the form of a copy of the Bidder's Quality Assurance Manual which addresses these elements.
3. The Bidder must also provide a minimum of one (1) samples of completed quality records used on the most recent marine vessel construction at its facility.
4. The quality control elements must include, as a minimum:

Quality Assurance Manual or Quality Assurance Program Descriptions
Inspection and Test Plan
Final Inspection
Quality Records

3.2.8 Insurance Requirements

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The Bidder must provide a letter from an insurance broker or an insurance company licensed to operate in Canada stating that the Bidder, if awarded a contract as a result of the bid solicitation, can be insured in accordance with the Insurance Requirements specified in *Part 6 - Resulting Contract Clause 6.19*.

If the information is not provided in the bid, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to meet the requirement.
Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.

3.3 Section II - Financial Bid

Bidders must submit their financial bid in accordance with the **Detailed Financial Bid Presentation at Annex D**.

3.3.1 Exchange Rate Fluctuation

C3011T, 2013-11-06, Exchange Rate Fluctuation

3.3.2 Financial Capability

A9033T, 2012-07-16, Financial Capability

3.3.3 Unscheduled Work

Bidders must provide the information requested in Annex D, Article D-2. The unscheduled work rates will be included in the Basis of Payment but will not form part of the bid evaluation.

3.4 Section III: Certifications

Bidders must submit the certifications required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

4.1.1.1 Mandatory Technical Criteria

In order to be compliant, the Bidder's proposal must, to the satisfaction of Canada:

- a) Meet all requirements of the SOW; and
- b) Provide all information as requested in PART 3 - BID PREPARATION INSTRUCTIONS

4.1.2 Financial Evaluation

SACC Manual Clause A0222T (2013-04-25), Evaluation of Price

4.2 Basis of Selection

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive as per Annex J- Evaluation plan. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

A mandatory requirement is described using the words "shall", "must", "will" "is required" or "is mandatory"

PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and associated information to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority may render the bid non-responsive or constitute a default under the Contract.

5.1 Certifications Required with the Bid

Bidders must submit the following duly completed certifications as part of their bid.

5.1.1 Declaration of Convicted Offences

As applicable, pursuant to subsection Declaration of Convicted Offences of section 01 of the Standard Instructions, the Bidder must provide with its bid, a completed Declaration Form, to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award and Additional Information

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

5.2.1 Integrity Provisions – List of Names

Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder.

Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).

Bidders bidding as societies, firms or partnerships do not need to provide lists of names.

In order to facilitate the compliance of the Bidder's obligations under the Integrity Provisions, it is suggested that the Bidder provide the information requested in Annex F, INFORMATION REQUIRED FOR THE VERIFICATION OF INTEGRITY PROVISIONS in its bid.

5.2.2 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list (http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml) available from Employment and Social Development Canada (ESDC) - Labour's website.

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid" list at the time of contract award.

PART6 - RESULTING CONTRACT CLAUSES

Les clauses et conditions suivantes s'appliquent à tout contrat subséquent découlant de la demande de soumissions et en font partie intégrante.

6.1 Security Requirement

There is no security requirement applicable to this Contract.

6.2 Statement of Work

The Contractor must fabricate and deliver the Department of Fisheries and Oceans one (1), 5.8 to 5.99 M aluminum jet boat with centre stand up console and trailer in accordance with the Technical Statement of Requirement- (TSOR) Annex A. and inspection as per Annex C- Inspection/Quality Assurance /Quality Control. All deliverable are to be delivered on or before November 20, 2015.

6.2.1 Optional Goods or Services.

The Contractor grants to Canada the irrevocable option to acquire 1 (one) additional 5.8 to 5.99 M aluminum jet boat with centre stand up console and trailer as described at Annex A of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option within 12 months after contract award by sending a written notice to the Contractor.

6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manua> l) issued by Public Works and Government Services Canada.

6.3.1 General Conditions

2030, 2015-07-03, Goods (Higher Complexity) apply to and form part of the Contract.

6.3.2 Supplemental General Conditions

1028, 2010-08-16, Ship Construction - Firm Price, apply to and form part of the Contract.

Conduct of Work. The Supplemental General Conditions 1028, Article 02 (2010-08-16) Conduct of Work, Paragraph 1. Canadian Labour is deleted in its entirety.

Warranty. The Supplemental General Conditions 1028, Article 12 (2010-08-16) – Warranty, Paragraph 3 is deleted and replaced with the following:

The warranty periods for the vessel, from the date of its delivery to and acceptance by Canada, are:

- a) Twelve (12) months for the boat propelling machinery and auxiliaries, fittings and equipment of all kinds (excluding Government Supplied Material).
- b) Twenty four (24) months for the vessel hull and welding.

6.4 Term of Contract

6.4.1 Delivery Date

All the deliverables must be received on or before _____ (Date to be entered at contract award)

6.4.2 Delivery Location

Fisheries and Oceans Canada
283 Haisla Blvd
Kitimat, BC V8C 2G7

Attention: (To be completed by the Contracting Authority at Contract Award)

Phone: TBD
FAX: TBD
E-Mail: TBD

6.4.3 Shipping Instructions - Delivery at Destination

1. Goods must be consigned to the destination specified in the Contract and delivered CIP, Carriage and Insurance Paid, to the destination(s) listed in 6.4.2, Incoterms 2000 for shipments from a commercial contractor.
2. The Contractor is responsible for all delivery charges from the Contractor's facility to destination, including administration costs, insurance and risk of transport.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Dave Castle
Title: Supply Specialist, Acquisitions, Marine
Public Works and Government Services Canada
Acquisitions Branch
Address: 1230 401- Government Street, Victoria B.C. V8W 3X3
Telephone: 250-217-6555
Facsimile: 250-363-3960
E-mail address: david.castle@pwgsc-tpsgc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.5.2 Technical Authority

The Technical Authority for the Contract is:

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone : _____
Facsimile: _____
E-mail address: _____

(Information will be provided at contract award)

The Technical Authority named above is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

6.5.3 Inspection Authority

The Inspection Authority for the Contract is:

Name: _____

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Title: _____
Organization: _____
Address: _____
Telephone: _____
Facsimile: _____
E-mail address: _____

(Information will be provided at contract award)

The Inspection Authority is the representative of the department or agency for whom the Work is being performed under the Contract and is responsible for inspection of the Work and acceptance of the finished work. The Inspection Authority may be represented on-site by a designated inspector and any other Government of Canada inspector who may from time to time be assigned in support of the designated Inspector.

6.5.4 Contractor's Representative

Name and telephone numbers of the person responsible for:

General Enquiries:

Name: _____ Telephone Number: _____
Facsimile Number: _____ E-mail address: _____

Delivery Follow-up:

Name: _____ Telephone Number: _____
Facsimile Number: _____ E-mail address: _____

6.6 Payment

6.6.1 Basis of Payment (to be completed by the Contracting Authority at Contract Award)

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm Price of \$ _____. Customs duties and Goods and Services Tax or Harmonized Tax is extra, if applicable.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.2 Charge-out Rate / Material Mark-up (to be completed by the Contracting Authority at Contract Award)

The following rates are included in the Basis of Payment and must remain valid for the duration of the contract:

Charge-out Rate: _____
Mark-up on Materials and Sub-Contracts: 10%

6.6.3 Unscheduled Work:

a) Price Breakdown:

The Contractor must, upon request, provide a price breakdown for all unscheduled work, by specific activities with trades, person-hours, material, subcontracts and services.

b) Pro-rated Prices:

Hours and prices for unscheduled work will be based on comparable historical data applicable to similar work at the same facility, or will be determined by pro-rating the quoted work costs in the Contract when in similar areas of the vessel.

c) Payment for Unscheduled Work:

The Contractor will be paid for unscheduled work arising, as authorized by Canada. The authorized unscheduled work will be calculated as follows:

- 6.6.3.1 Number of hours (to be negotiated) X \$_____, being the Contractor's firm hourly charge-out labour rate which includes overhead and profit, plus net laid-down cost of materials to which will be added a mark-up of 10 percent, customs duties are included and applicable taxes are extra. The firm hourly charge-out labour rate and the material mark-up will remain firm for the term of the Contract and any subsequent amendments.
- 6.6.3.2 Notwithstanding definitions or useage elsewhere in this document, or in the Contractor's Cost Management System, when negotiating *Hours* for unscheduled work, PWGSC will consider only those hours of labour directly involved in the production of the subject work package. Elements of *Related Labour Costs* identified in 6.3.3.3, will not be negotiated, but will be compensated for in accordance with 6.3.3.3.
- 6.6.3.3 Allowance for *Related Labour Costs* such as: Management, Direct Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, First Aid, Gas Free Inspecting and Reporting, and Estimating will be included as *Overhead* for the purposes of determining the *Charge-out Labour Rate* set out in clause 6.6.2
- 6.6.3.4 The 10% mark-up rate for materials will also apply to subcontracted costs. The mark-up rate includes any allowance for material and subcontract management not allowed for in the Chargeout Labour Rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.

6.6.4 Payment for Fuels, Oils and Lubricants

The Contractor is responsible for the supply and cost of all fuel, lubricating oil, hydraulic oil and other lubricants sufficient for fully charging all systems as required for operating the machinery and other equipment and for performing all tests and trials.

6.6.5 Field Engineering and Supervisory Services

If Field Service Representatives (FSR) and/or Supervisory Services are required for the Work, the cost of all such services is to be included in the price for the Work.

6.6.6 Limitation of Price

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

6.6.7 Method of Payment- Single payment

Canada will pay the Contractor upon completion and delivery of the Work in accordance with the payment provisions of the Contract if:

- a. an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b. all such documents have been verified by Canada;
- c. the Work delivered has been accepted by Canada.

6.7 Invoicing Instructions

The Contractor must submit invoices in accordance with the information required in Section 13 of 2030 General Conditions Higher Complexity Goods, article 6.6.7 Method of Payment.

Invoicing Address:

Invoices are to be made out and sent to:
Canadian Coast Guard
200 Kent Street, Mail Station: 7W064
Ottawa, Ontario, K1A 0E6

Attention: TBD

A copy of the original invoice must be forwarded to:

Public Works and Government Services Canada
Acquisitions, Marine
401 - 1230 Government Street
Victoria, B.C., V8W 3X4 Attention: David Castle

6.7.1 Warranty Holdback

A warranty holdback of 3% will be applied to the claim(s) for payment. This holdback is payable by Canada upon the expiry of the warranty period(s) of three (3 months applicable to the Work. Goods and Services Tax or Harmonized sale Tax (GST/HST), as appropriate, is to be calculated and paid on the total amount of the claim before the 3 percent holdback is applied. At the time that the holdback is released, there will be no GST/HST payable, as it was included in the previous payments.

6.7.2 Outstanding Work Holdback

In addition to any amount held under the Warranty Holdback Clause, a holdback of twice the estimated value of outstanding work will be held until completion of the Work. Applicable Taxes will be calculated on this outstanding work holdback amount and paid at the time that the outstanding work holdback is released.

6.8 Certifications

Compliance with the certifications provided by the Contractor in its bid is a condition of the Contract and subject to verification by Canada during the term of the Contract. If the Contractor does not comply with any certification or it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

6.9 Welding Certification – Contract

1. The Contractor must ensure that welding is performed by a welder certified by the Canadian Welding Bureau (CWB) in accordance with the requirements of the following Canadian Standards Association (CSA) standards:
 - (a) CSA W47.2-M1987 (R2003), Certification for Companies for Fusion Welding of Aluminum division 2.1.
2. In addition, welding must be done in accordance with the requirements of the applicable drawings and specifications.
3. Before the commencement of any fabrication work, and upon request from the Inspection Authority, the Contractor must provide approved welding procedures and/or a list of welding personnel he intends to use in the performance of the Work. The list must identify the CWB welding procedure qualifications attained by each of the personnel listed and must be accompanied by a copy of each person's current CWB welding certification.

6.10 Project Schedule

1. The Contractor must provide a detailed project schedule in MS Project format or equivalent to the Contracting Authority and the Technical Authority **5 days after award of Contract**. This schedule must highlight the specific dates for the events listed below.
 - (a) hull materials delivered to Contractor and sustained construction commenced;
 - (b) hull and deck completed, but not closed in to allow for full inspection of the structure and welding. The Contractor must supply a hard copy of the material certificates and construction drawings to the Technical/Inspection Authority one week prior to inspection by the Technical/Inspection Authority;
 - (c) outfitting/electrical 75% complete but all equipment and components delivered to the Contractor and available for full inspection. The Contractor must supply a hard copy of the list of equipment

- and electrical supplies to the Technical/Inspection Authority one week prior to inspection by the Technical/Inspection Authority;
- (d) technical manuals delivered to Canada for approval (no less than 14 days prior to the planned delivery date);
 - (e) Contractor's tests and trial and final sea trials required by the SOW;
 - (f) boat and trailer delivered to Canada for approval;
 - (g) the start and the end of the twelve (12) month warranty period.

Note: Technical Manuals will not be returned once approved.

2. The schedule is to be regularly updated and available in the Contractor's office for review by Canada's authorities to determine the progress of the Work.

6.11 Progress Reports

1. The Contractor must submit monthly reports on the progress of the Work in an electronic format to the Technical Authority and to the Contracting Authority.
2. The progress report must contain two (2) Parts:
- (a) PART 1: The Contractor must answer the following three questions:
 - (i) is the project on schedule?
 - (ii) is the project within budget?
 - (iii) is the project free of any areas of concern in which the assistance or guidance of Canada may be required?

Each negative response must be supported with a clarification.

- (b) PART 2: A narrative report, brief, yet sufficiently detailed to enable the Technical Authority to evaluate the progress of the Work, containing as a minimum:
 - (i) a description of the progress of each task and of the Work as a whole during the period of the report. Sufficient sketches, diagrams, photographs, etc., must be included, if necessary, to describe the progress accomplished.
 - (ii) reasons of any variation from the schedule.

6.12 SACC Manual Clauses

B9035C - Progress Meetings	2008-05-12
B5007C - Procedures for Design Change or Additional Work	2010-01-11
D3015C - Dangerous Goods/Hazardous Products	2007-11-30
D0018C - Delivery and Unloading	2007-11-30
C0711C - Time Verification	2008-05-12

6.13 Trade Qualifications

The Contractor must use qualified, certified (where applicable) and competent tradespeople and supervision to ensure a uniform high level of workmanship. The Contracting Authority may request to view and record details of the certification and/or qualifications held by the Contractor's tradespeople. This request should not be unduly exercised but only to ensure qualified tradespeople are on the job.

6.14 Quality Management Systems

1. The Contractor must have in place a Quality Assurance Program approved by the Inspection Authority during the performance of the Work which addresses the quality control elements below.
2. The quality control elements must include, as a minimum:
- Quality Assurance Manual or Quality Assurance Program Descriptions
 - Inspection and Test Plan
 - Final Inspection
 - Quality Records

3. The Contractor's facilities may be audited by Canada, or its authorized representative, during the performance of the Work to ensure that the approved system is in place and in accordance with the foregoing requirement.
4. The Contractor will be required to submit completed quality assurance documentation with each claim for payment as applicable.

6.15 Post Contract Award/Pre-Production Meeting

Within three (3) working days of the receipt of the contract, the Contractor must contact the Contracting Authority to determine the details of a pre-production meeting. The meeting will be held at the Contractor's plant or via telephone or video conference. The Cost of holding such a pre-production meeting must be included in the price of the bid. Please note that the travel and living expenses for Government Personnel will be arranged and paid for by the Canada.

6.16 Manuals

1. The Contractor must obtain and deliver to the Technical Authority for approval, all Data Books, Operating Instruction Books, Maintenance Manuals and Spare Parts Lists (including part numbers and ordering instructions) for all machinery and equipment fitted on the Vessel as required. These must be received no later than fourteen (14) calendar days prior to the delivery of each boat and once approved by the TA, the Contractor must provide two (2) complete copies in accordance with and as specified in the **SOW, Appendix I- Final deliverable data package**
2. Where manuals are examined by Canada, such examination does not relieve the Contractor of any responsibility under the Contract for ensuring the correctness of all details and adequacy of performance of the Vessel, nor does it obligate Canada to accept, in whole or in part, an item of Work completed in accordance with such manual, nor does it mean such an item of Work meets the requirements of the SOW.

6.17 Inspection, Test & Trials

1. During Construction of the vessel, the Contractor must arrange for regular inspections and upon completion of the construction of the vessel, the Contractor must arrange trials. All Inspections and test and trials performed must be in accordance with the SOW and the **Annex E - Inspection/Quality Assurance/Quality Control**. The Inspection Authority must approve any additional testing not specified in the SOW.
2. The Contractor must update as required the Inspection and Test Plan (ITP) provided with its bid and submit to the Contracting Authority and the Inspection Authority seven (7) days after contract award for review and approval.
0. Once approved, any modification to the ITP must be pre-approved by the Inspection Authority. A revised ITP will be required should any modification be made.

6.18 Government Supplied Material (GSM)

As per the SOW, **Article 4.1.8**, the Contractor must install, as per the manufacturer's recommendations, the following GSM:

- (a) one (1) 200 HP Mercury Optimax-Jet

Note: The engines will ordered and shipped immediately after contract award upon- As per Annex A – Statement or Work- Propulsion system- "The contractor is to specify the engine horse power of the main engine to meet the maximum speed requirement "

6.19 Insurance Requirements

The Contractor must comply with the insurance requirements specified in **Articles 6.19.1** and **6.19.2** below. The Contractor must maintain the required insurance coverage for the duration of the Contract. Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract.

The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

The Contractor must forward to the Contracting Authority within ten (10) days after the date of award of the Contract, a Certificate of Insurance evidencing the insurance coverage and confirming that the insurance policy complying with the requirements is in force. Coverage must be placed with an Insurer licensed to carry out business in Canada. The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

6.19.1 Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$2,000,000 per accident or occurrence and in the annual aggregate.
2. The Commercial General Liability policy must include the following:
 - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Public Works and Government Services Canada.
 - (b) Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
 - (c) Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.
 - (d) Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
 - (e) Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
 - (f) Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
 - (g) Employees and, if applicable, Volunteers must be included as Additional Insured.
 - (h) Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program).
 - (i) Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
 - (j) Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of policy cancellation.

- (k) If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.
- (l) Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.
- (m) Litigation Rights: Pursuant to subsection 5(d) of the Department of Justice Act, S.C. 1993, c. J-2, s.1, if a suit is instituted for or against Canada which the Insurer would, but for this clause, have the right to pursue or defend on behalf of Canada as an Additional Named Insured under the insurance policy, the Insurer must promptly contact the Attorney General of Canada to agree on the legal strategies by sending a letter, by registered mail or by courier, with an acknowledgement of receipt.

For the province of Quebec, send to: Director Business Law Directorate,
Quebec Regional Office (Ottawa),
Department of Justice,
284 Wellington Street, Room SAT-6042, Ottawa, Ontario, K1A 0H8

For other provinces and territories, send to: Senior General Counsel,
Civil Litigation Section, Department of Justice
234 Wellington Street, East Tower
Ottawa, Ontario K1A 0H8

A copy of the letter must be sent to the Contracting Authority. Canada reserves the right to co-defend any action brought against Canada. All expenses incurred by Canada to co-defend such actions will be at Canada's expense. If Canada decides to co-defend any action brought against it, and Canada does not agree to a proposed settlement agreed to by the Contractor's insurer and the plaintiff(s) that would result in the settlement or dismissal of the action against Canada, then Canada will be responsible to the Contractor's insurer for any difference between the proposed settlement amount and the amount finally awarded or paid to the plaintiffs (inclusive of costs and interest) on behalf of Canada.

6.19.2 Marine Liability Insurance

1. The Contractor must obtain Protection & Indemnity (P&I) insurance that must include excess collision liability and pollution liability. The insurance must be placed with a member of the International Group of Protection and Indemnity Associations or with a fixed market in an amount of not less than the limits determined by the Marine Liability Act, S.C. 2001, c. 6. Coverage must include crew liability, if it is not covered by Worker's Compensation as detailed in paragraph (2.) below.
2. The Contractor must obtain Worker's Compensation insurance covering all employees engaged in the Work in accordance with the statutory requirements of the Territory or Province or state of nationality, domicile, employment, having jurisdiction over such employees. If the Contractor is assessed any additional levy, extra assessment or super-assessment by a Worker's Compensation Board, as a result of an accident causing injury or death to an employee of the Contractor or subcontractor, or due to unsafe working conditions, then such levy or assessment must be paid by the Contractor at its sole cost.
3. The Protection and Indemnity insurance policy must include the following:
 - (a) Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada as additional insured should read as follows: Canada represented by Public Works and Government Services Canada.
 - (b) Waiver of Subrogation Rights: Contractor's Insurer to waive all rights of subrogation against Canada as represented by Department of Fisheries and Oceans and Public Works and Government Services Canada for any and all loss of or damage to the watercraft however caused.

- (c) Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of cancellation.
- (d) Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
- (e) Litigation Rights: Pursuant to subsection 5(d) of the Department of Justice Act, S.C. 1993, c. J-2, s.1, if a suit is instituted for or against Canada which the Insurer would, but for this clause, have the right to pursue or defend on behalf of Canada as an Additional Named Insured under the insurance policy, the Insurer must promptly contact the Attorney General of Canada to agree on the legal strategies by sending a letter, by registered mail or by courier, with an acknowledgement of receipt.

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Quebec Regional Office (Ottawa),
Department of Justice,
284 Wellington Street, Room SAT-6042, Ottawa, Ontario, K1A 0H8

For other provinces and territories, send to:

Senior General Counsel, Civil Litigation Section, Department of Justice
234 Wellington Street, East Tower
Ottawa, Ontario K1A 0H8

4. A copy of the letter must be sent to the Contracting Authority. Canada reserves the right to co-defend any action brought against Canada. All expenses incurred by Canada to co-defend such actions will be at Canada's expense. If Canada decides to co-defend any action brought against it, and Canada does not agree to a proposed settlement agreed to by the Contractor's insurer and the plaintiff(s) that would result in the settlement or dismissal of the action against Canada, then Canada will be responsible to the Contractor's insurer for any difference between the proposed settlement amount and the amount finally awarded or paid to the plaintiffs (inclusive of costs and interest) on behalf of Canada.

6.20 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (To be completed by the Contracting Authority at Contract Award)

6.21 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

1. The Articles of Agreement;
2. The Supplemental General Conditions **1028, 2010-08-16**, Ship Construction Firm Price;
3. The General Conditions **2030, 2015-07-03**, Goods (Higher Complexity);
4. Annex A - Statement of Work;
5. Annex C - Inspection/Quality Assurance/Quality Control;
6. The Contractor's bid dated _____ (insert date of bid) (If the bid was clarified or amended, insert at the time of contract award: ", as clarified on _____" **or** ", as amended on _____" and insert date(s) of clarification(s) or amendment(s)).

6.22 Acceptance

1. The Inspection Authority, in conjunction with the Contractor, will prepare a list of outstanding work items at the end of the vessel's construction period. This list will form the annexes to the formal acceptance document for the vessel. A vessel acceptance meeting or telephone conference will be convened by the Inspection Authority on the work completion date of the vessel to review and sign off the form PWGSC-TPSGC 1105, Contractor's Certification.

Solicitation No. - N° de l'invitation
F7047-150016 /A
Client Ref. No. - N° de réf. du client
F7047-150016

Amd. No. - N° de la modif.
File No. - N° du dossier
XLV-5-38088

Buyer ID - Id de l'acheteur
xlV166
CCC No./N° CCC - FMS No./N° VME

2. The Inspection Authority must complete the above form and obtain the signatures of the Contractor and the Contracting Authority. The form will then be distributed by the Inspection Authority as follows:
 - a. one copy to the Contracting Authority;
 - b. one copy to the Technical Authority;
 - c. one copy to the Contractor.

Solicitation No. - N° de l'invitation
F7047-150016 /A
Client Ref. No. - N° de réf. du client
F7047-150016

Amd. No. - N° de la modif.
File No. - N° du dossier
XLV-5-38088

Buyer ID - Id de l'acheteur
xlV166
CCC No./N° CCC - FMS No./N° VME

ANNEX A - STATEMENT OF WORK

DEPARTMENT OF FISHERIES AND OCEANS

ANNEX A **Technical Statement of Requirements** **Requisition number F7047-150016**

For the provision of:

**One (1), 5.8 to 5.99 m Aluminium Jet
Boat with centre stand up console and
trailer; and,**

**The option to provide one (1)
additional boat and trailer as above.**

July 25, 2015 Revision 0

**TRANSPORT CANADA MARINE SAFETY BRANCH (TCMSB)
TP1332 APPROVED CONSTRUCTION**

Canada

Solicitation No. - N° de l'invitation
F7047-150016 /A
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Buyer ID - Id de l'acheteur
xlv166
CCC No./N° CCC - FMS No./N° VME

Document Control

Record of Amendments

#	Date	Description	Initials
0	July 25, 2015	Original Issue	KA

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ABBREVIATIONS

ABYC	American Boat and Yacht Council
AC	Alternating Current
ASTM	American Society for Testing and Materials
CFM	Contractor Furnished Material
CSA	<i>Canadian Shipping Act</i>
CSA	Canadian Standards Association
COLREGS	Collision Regulations
DC	Direct Current
FRP	Fibre/Glass Reinforced Plastic
GPS	Global Positioning System
GSM	Government Supplied Material
ISO	International Organization for Standardization
PVC	Polyvinylchloride
TA	Technical Authority (As defined by the Contract)
TCMS	Transport Canada Marine Safety
TSOR	Technical Statement of Requirements
UV	Ultraviolet
VHF	Very High Frequency
WMO	World Meteorological Organization

LIST OF REFERENCE DOCUMENTS

REFERENCE	TITLE
ASTMF1166	Standard Practice for Human Engineering Design for Marine Systems, Equipment and Facilities
TP 1332	Construction Standards for Small Boats
TP 13430	Standard For Tonnage Measurement of Ships
TP 14070	Small Commercial Vessel Safety Guide
ISO 12217	Small Craft – Stability and Buoyancy Assessment and Categorization
ISO 6185	Shipbuilding and Marine Structures – Inflatable Boats
Canada Shipping Act	Small Vessel Regulations
Canada Shipping Act	Collision Regulations (COLREGS)
ABYC	American Boat and Yacht Council Standards
Canadian Standards Association (CSA) CSA W47.2-M1987	Certification of Companies for Fusion Welding of Aluminium
(CSA) C22.2 No. 183.2-M1983 (R1999)	Standards for DC Electrical Installations on Boats

1.0 OVERVIEW

The Department Of Fisheries and Oceans (DFO) buys, manages and operates numerous small craft in support of its Departmental programs and other missions.

1.1 REQUIREMENT

1.1.1 General Information: This vessel is intended to be built based on stock small working or commercial vessel hull forms with a minimum of customization as indicated herein. Prototype hulls will not be considered for this procurement. A minimum of two proven hulls must be shown to have been produced and be in service within the last 5 years for the Contractor to indicate suitability of the hull for this procurement. Bidders must submit at a minimum the following items for each proven hull: General arrangement drawings; Photographs; References; Builder's plates; Hull identification numbers confirming the multiple builds.

1.1.2 The Contractor must design, fabricate and supply quantity, one (1) Aluminum, Jet Boat with trailer based on the current Transport Canada Marine Safety Branch (TCMSB) Marine Safety Publication TP 1332 "Construction Standards for Small Vessels" (hereinafter referred to as TCMSB TP 1332). The boats must be 200hp Inboard Jet gasoline motor configuration.

1.1.3 The primary role of this boat will be used for various hatchery operation activities including in-river monitoring, juvenile assessment programs and adult salmon brood capture. This requires operations in various river conditions including shallow braided channels and fast flowing rapids. Lake colonization and nutrient monitoring is a key task for the vessel in support of recent strategy changes in juvenile salmon rearing programs. Near shore marine use will relate to beach seining activities as well as a marine plankton sampling program The boat is required to be capable of operating in shallow draft conditions (i.e. minimum depth of 0.2 meter) as well as variable open water conditions (waves & swells up 1.85 meter) while providing a reasonable standard of passenger comfort. The vessel will be trailered locally on paved roads with occasional travel on gravel logging roads. The boat will be trailered extensively over long distances on gravel roads and launched from all types of remote location launch ramps.

1.1.4 The secondary roles will be search and rescue and other fisheries enforcement duties such as boarding and surveillance duties within the reasonable capabilities for this type and size of vessel.

1.1.5 This vessel will be shore-based and launched and recovered by trailer.

1.2 OPTIONAL BOAT

1.2.1 The Contractor must grant an option for one (1) additional Jet Boat with trailer and documentation in accordance with this Technical Statement of Requirements (TSOR), as per the Contract.

1.3 TECHNICAL & DOCUMENTATION REQUIREMENTS

The Contractor is responsible for all aspects of design and production of the vessel and must prepare their own Project Data Package to define the vessel and control the production process.

1.3.1 Bid Deliverable Data Package

Requirements for Bid Deliverables are given in the Solicitation Document and applicable Annexes.

1.3.2 Preliminary Data Package

The Preliminary Data Package must demonstrate that the vessel will be fully seaworthy, operable and fit in all regards for the purposes intended. The Contractor must submit their Preliminary Data Package for review by the Technical Authority and in accordance with the Contract.

In addition to any requirements given in the Contract and applicable Annexes, the Preliminary Data Package must include, but will not necessarily be limited to, the following technical drawings and information:

- 1.3.2.1 A general arrangement.
- 1.3.2.2 Structural Drawings showing Deck Plan, a Centerline profile.
- 1.3.2.3 A detailed Lines Plan.
- 1.3.2.4 A drawing of the fuel supply arrangement.
- 1.3.2.5 A drawing of bilge pumping system
- 1.3.2.6 Electrical one-line diagram.
- 1.3.2.7 The lightship weight.
- 1.3.2.8 Draft Stability Calculation of the proposed vessel.
- 1.3.2.9 A Project Plan (written description) of how the Bidder/Contractor will comply with the TSOR. The written description must address each main element of the TSOR and indicate how the Bidder/Contractor will comply with the intent of the TSOR and successfully deliver the vessel(s) to the performance standard(s) identified.
- 1.3.2.10 A Preliminary Production Schedule which must verify the Bidder/Contractor's ability to deliver the vessel(s) in accordance with the requirements of the Solicitation.

1.3.3 Construction Data Package

The Contractor must revise and update their Preliminary Data Package to incorporate comments from the Technical Authority and must complete and submit their Construction Data Package to the Technical Authority. The Contractor must update their Construction Data Package to reflect changes in the requirement and/or changes in materials or equipment as necessary or when requested.

In addition to any requirements given in the Contract and applicable Annexes, the Construction Data Package must include, but will not necessarily be limited to, the following technical drawings and information:

- 1.3.3.1 All technical drawings and information identified within the "Preliminary Data Package", updated as necessary (excepting that the "Project Plan" need not be revised);

- 1.3.3.2 The "Preliminary Production Schedule" must be expanded to a "Production Schedule" which must be regularly updated to demonstrate progress of the work and anticipated completion date;
- 1.3.3.3 Lightship weight and center of gravity calculations must be monitored and the Technical Authority must be advised of changes as they are identified;
- 1.3.3.4 Stability calculations must be revised when necessary or when requested;
- 1.3.3.5 Speed and endurance calculations;
- 1.3.3.6 Additional technical drawings, schedules and information as necessary to fully define the vessel;
- 1.3.3.7 Contractor shop drawings;
- 1.3.3.8 Technical information pertaining to materials and equipment;
- 1.3.3.9 Material certificates; and,
- 1.3.3.10 Other applicable technical information including samples of materials if requested.

1.3.4 Final Data Package

The Contractor must provide to Canada all documentation required by the Contract, this TSOR and other annexes or attachments to the Contract.

The minimum acceptable final data package is as attached hereto at Appendix I.

1.4 PROJECT & MANAGEMENT REQUIREMENTS

The Project & Management Requirements, including deliverable requirements, are defined in the Contract and/or applicable Annexes.

The Bid deliverable requirements are defined in the Solicitation Document and Evaluation Plan.

1.5 BID EVALUATION CRITERIA

Mandatory and/or point rated technical criteria applicable to the evaluation of bids are defined in the Solicitation Document and/or Evaluation Plan.

2.0 DESIGN AND CONSTRUCTION REQUIREMENTS

Unless stated otherwise all components, equipment and material must be Contractor supplied.

2.1 ERGONOMIC DESIGN

2.1.1 Hazardous operating conditions must be prevented by arranging machinery and equipment in a safe manner; providing guards for all electrical, mechanical and thermal hazards to personnel; and providing guards or covers for any controls that might accidentally be activated by contact of personnel.

2.1.2 The boats must be designed and constructed to accommodate both male and female crew from approx. 5' 5" to 6' 4" in height, wearing cold weather clothing and equipment in accordance with ASTM F1166-07 Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities.

2.1.3 Human engineering factors considered in design must include accessibility, visibility, readability, crew efficiency and comfort. All equipment must be accessible for use, inspection, cleaning and maintenance as per ASTM F1166-07.

2.2 VIBRATION

2.2.1 The boat and all components must be free of local vibration that could endanger boat personnel, damage boat structure, machinery or systems, or interfere with the operation or maintenance of boat machinery or systems.

2.2.2 Mounts for movable components, including items moved for stowage, towing or transport must be provided with resilient material as necessary to prevent rattling.

2.2.3 Loosening of fasteners under vibration must be prevented by the use of self-locking fasteners.

2.3 EQUIPMENT PROTECTION

The Contractor is responsible for the care of all equipment. All parts, especially those having working surfaces or passages intended for lubricating oil, must be kept clean and protected during manufacture, storage, assembly and after installation. Equipment must at all times be protected against dust, moisture or foreign matter and must not be subject to rapid temperature changes or extremes in temperature.

2.4 SITE CLEANLINESS

During construction, all chips, shavings, refuse, dirt and water must be removed at the completion of the work shift or sooner. The Contractor must ensure measures are taken to avoid wear and damage incident to construction, and to prevent corrosion or other deterioration. Equipment subject to freezing must be kept drained, except during test and trials. Equipment must be kept clean and protected from the environment prior to installation.

2.5 STRUCTURAL STRENGTH

All structures and components (hull, deck, seating, etc.) must be of sufficient strength to withstand when in the Normal Load Condition, the lateral and vertical impact-loading that equates to the conditions of the operational requirements.

2.6 LAUNCHING

The boat must be capable of being launched, recovered and transported by road trailers and / or from other vessels as indicated in this TSOR.

2.7 HULL

The hull must be constructed of Aluminum.

2.8 DECK

The deck and hull must be constructed of aluminum and have a suitable non-skid surface. Decks must be self-draining, by means of non-return freeing ports or similar. The deck above the watertight compartments must be bolted for easy removal to allow access for repair of buoyancy compartments beneath.

2.9 TIE DOWNS

Flush mounted deck tie downs will be fitted on the forward deck area for the securing of deck cargo. (Minimum of 4 required).

2.10 STOWAGE

The Contractor must provide a watertight compartment for safe stowage of equipment and accessories. Arrangements must be provided for safe, secure and accessible stowage of an anchor and cable, paddles, and other equipment.

2.11 TOWING/TRAILERING

A bow eye or U-bolt arrangement must be incorporated into the construction of the stem, suitable for towing the boat at a speed of 5 knots in calm water in the normal loaded condition, on an even keel without damaging the boat or causing undue chafing of the towline. This bow eye must also be suitable for trailering purposes.

2.12 STANDARDS

- 2.12.1** Boats constructed under this TSOR must be fabricated in accordance with the current TCMSB TP 1332 "Construction Standards for Small Vessels" and where applicable the American Boat & Yacht Council (ABYC)
- 2.12.2** CSA C22.2 No. 183.2-M1983 (R1999) Standards for DC Electrical Installations on Boats and ABYC 'E' Electrical Standards.
- 2.12.3** CWB CSA \ACNOR W47.2; Division 2.1 certification for Aluminum Welding—latest revision."
- 2.12.4** The Contractor must construct each boat as per this TSOR and where this TSOR interferes or contravenes the above standard; the above TCMSB TP 1332 standard will take precedence

2.13 MATERIALS

- 2.13.1** All materials must be corrosion resistant and suitable for use in a salt water environment as detailed in the Operational Requirements. All materials normally subjected to sunlight must resist degradation caused by ultraviolet radiation. Galvanized materials are unacceptable.
- 2.13.2** Dissimilar Metals: Direct contact of electrolytically dissimilar metals is not allowed. Electrolytic corrosion must be prevented by insulating dissimilar materials from each other with gaskets, washers, sleeves, or bushings of suitable insulating material.
- 2.13.3** Aluminium: Aluminium alloy types 5086-H32 must be used for plate; aluminium alloy 6061-T6 (anodized grade), suitable for type 5356 filler alloy, must be used for extruded shapes and 6063 for welded tubing and pipe. Non-structural items of trim and outfit such as hatch frames, castings, consoles, and hardware items may be of other aluminium alloys suitable for commercial saltwater marine use such as dual rated 5083 / 86 or 5052 or 6063-T54.
- 2.13.4** Stainless Steel: Stainless steel type 316L or 316 must be used for all stainless steel applications except as noted. Alloy 316L must be used in any welded underwater components.
- 2.13.5** Fittings and clamps must be stainless steel. Bolts used in all fittings must be Type 316 stainless steel.
- 2.13.6** Where flexible connections are required for steering and fuel systems, suitable hose with permanently crimped, detachable reusable type fittings must be used.

2.13.7 All materials and equipment must be stored installed and tested in accordance with the manufacturer's guidelines, recommendations and requirements.

2.14 FASTENERS

2.14.1 All fasteners must be of corrosion resistant materials.

2.14.2 Cadmium plated parts and fasteners, including washers, must not be used.

2.14.3 Direct attachment of alloys containing copper to aluminium is not permitted except for an electrical bonding strap.

2.14.4 No fasteners must be directly threaded into Aluminum. Aluminium or Stainless steel washers or backing plates must be used as appropriate.

2.14.5 Where nuts will become inaccessible after assembly of the vessel, nuts must be captured or anchored to allow reassembly and prevent backing off. Unless otherwise specified, self-locking nuts must be installed to prevent loosening of fasteners due to shock and vibration.

2.14.6 Fasteners in deck traffic areas must be flush-mounted to eliminate tripping and snagging hazards.

2.15 FACILITIES

The Contractor must have a shop capable of maintaining temperature and humidity appropriate for painting and as applicable. It must be capable, when necessary, of maintaining temperature between 16°C and 25°C and maintaining relative humidity below 70%.

3.0 OPERATIONAL REQUIREMENTS

3.1 GENERAL

Unless otherwise stated, performance must be for conditions of zero sea state and no wind, in salt water in normal load condition. The boats must be designed and constructed for ease of maintenance and repair, long life, and are to be easily supportable in the location of the delivery address of the boat, by local commercial facilities and suppliers. The boat must be expected to have a service life of at least 7 years, with an expected usage of between 400 and 500 hours per year.

3.2 CRUISING SPEED

Contractor must indicate the expected cruising speed in normal load condition. The cruising speed must be between 20 and 25 knots.

3.3 MAXIMUM SPEED

Contractor must indicate expected maximum speed in normal load condition. The maximum speed at trial must be not less than 30 knots.

3.4 RANGE

Contractor must indicate expected range at cruising speed in nautical miles, with 10% reserve fuel.

3.5 MANOEUVRABILITY

Capable of steering 15° from heading in Beaufort Force 4 with seas from any direction. Steer and manoeuvre effectively at 5 knots in Beaufort Force 4. Maintain course, made good over ground, when proceeding at 3 knots with relative crosswind of 15 knots.

3.6 BEACHING

3.6.1 Capable of beaching on soft (sand, earth or clay) surfaces at a speed of up to 5 knots without damage to the hull.

3.6.2 Capable of beaching on hard (stone or concrete) surfaces at speeds of up to 3 knots without damage to the hull.

3.7 ENVIRONMENTAL CONDITIONS

Capable of operating day or night in the following conditions:

3.7.1 Average ambient air temperature range: -5 ° C to + 30 ° C

3.7.2 Average water temperature: 0 ° C to +20 ° C.

3.7.3 Wave heights of 1 meters to 1.5 meters (WMO Sea-State 4).

3.7.4 Wind speeds of 11-16 knots minimum.

3.7.5 Required to operate safely in ice infested waters, (some minor damage to the boat, not affecting stability or buoyancy is acceptable). Boat operates in freezing spray or freezing rain with accumulations of up to 6.0 mm while maintaining stability while allowing for safe transit in Beaufort force 6.

3.8 LAUNCHING, RECOVERY & TRANSPORTATION

The craft must be readily road transportable on a trailer, must be able to be launched and recovered using the trailer at existing launch ramps.

3.9 MAINTENANCE

The craft must be designed and constructed for ease of maintenance and repair, long life, and be easily supportable by local commercial facilities and suppliers.

4.0 PHYSICAL CHARACTERISTICS

Aluminum "V" style monohull having a raked stem and transom stern with a reverse chine flat.

Vessel style – Open working deck, center stand up console. The console must be located to allow for 1 meter of aft deck space from the forward edge of the engine box to the aft edge of the console. A forward bow rider step deck, 0.2m step up from the main deck extending across the breadth of the vessel and a length of 1m from the stem.

4.1 VESSEL PARTICULARS

4.1.1 Length overall - of hull is to be 18.0 to 18.5 feet not including the swim grid.

4.1.2 In the event that the overall length, measured including the swim grid, exceeds 5.99 m then the swim grid must be a bolt-on attachment such that the official length will not exceed 5.99 m.

4.1.3 Extreme breadth must not exceed 7.5 feet.

4.1.4 Breadth measured at sheer must be 7.0 to 7.5 feet.

4.1.5 Maximum breadth measured at chine is to be 6.0 feet.

4.1.6 Minimum hull side panel height measured from chine to sheer is to be 30 inches.

4.1.7 A foc'sle deck at the bow, approximately 30" to be positioned ½ way between the working deck and top of bulwark. Primary consideration must be given to the working deck, minimum 4.5 feet from forward side of console to the start of the foc'sle deck. The space below the Foc'sle will be used for

- storage, therefore a weathertight access hatch will be required and the working deck must continue as far forward as possible below the foc'sle.
- 4.1.8 Propulsion** – One 200 HP Mercury Optimax Jet supplied by the Government (GSM).
- 4.1.9 Normal load condition:**
- 4.1.9.1 Crew of 2 with Kit = 300kg
 - 4.1.9.2 Fuel = Minimum 140 liters in one tank, (Total 112kg)
 - 4.1.9.3 Equipment & supplies = 600kg

5.0 VESSEL CONFIGURATION

5.1 HULL

- 5.1.1** Hull form shall be a 8 degree deadrise V-bottom (+/- 1 deg), constant angle measured from transom to at least 50% of length from stern forward and faired as necessary into the stem.
- 5.1.2** Main chines of no less than 4" width shall run the full length, fitted with an 6 to 8 degree reverse angle flat tapered into the stem.
- 5.1.3** Bottom hull spray strakes to be incorporated into the hull design to increase maneuverability at lower operational speeds.
- 5.1.4** Hull to be fitted with a Delta Pad keel, suitable to incorporate the jet drive.
- 5.1.5** A full width swim grid is required, its minimum length to cover the jet equipment and incorporate jet drive unit protection. The engine guard over jet drive must be removable.
- 5.1.6** Fixed trim tabs shall be incorporated into the aft bottom structure protruded aft of the transom port and starboard.
- 5.1.7** Hull bottom from keel to chine is to be fitted for its full length with a protective slip surface, UHMW plastic 3/8" thick, or equal. The UHMW is to be attached with countersunk Grade 8 screws set into pre-tapped or threaded holes and sealed with Sikaflex.
- 5.1.8** Hull shape must not impede water flow to the propulsion unit and must direct spray and waves away from on board personnel.

5.2 HULL STRUCTURE

- 5.2.1** The hull, and deck, must be constructed of Aluminium Materials. A copy of the Mil Certificates shall be provided to the Technical/Inspection Authority for all aluminium used in the fabrication.
- 5.2.2** Vessel to have a fully welded hull shell and swim grid. Framing welds must be continuous in areas subject to vibration in the vicinity of machinery bedplates and bow areas subject to impact.
- 5.2.3** Limitation of weight is important, particularly to facilitate handling in beaching situations. Every effort must be made to control the weight of the vessel without compromising general strength. The framing schedule may be lighter, and/or topside hull plating may employ embossed strakes to increase stiffening.
- 5.2.4** Hull bottom and chine plating to be minimum 3/16" plate
- 5.2.5** Delta Pad keel plate is to be minimum 3/8" plate
- 5.2.6** Side plating is to be minimum 0.125" plate (embossed and framed)

- 5.2.7 Deck plating and net deck is to be minimum 3/16" checker plating
- 5.2.8 Gunwale deck stringer is to be minimum 3/16" plating (not checker plate)
- 5.2.9 The hull and decks are to be transversely framed and fitted with longitudinal stringers,
- 5.2.10 Bottom stringers: A minimum of 6 full-length (bottom) stringers is required, or minimum 4 box (top hat) girders with approximately 6" base on hull per girder, not including bar keel forward integrated with delta pad stiffener. Stringers to be 1/4" type 6061 extrusions, or if box type .102" plate, or other arrangement providing equivalent support.
- 5.2.11 Support of bow area is to be provided through web frames and/or extension of at least one bottom stringer across the bow plating to the sheer stringer plate.
- 5.2.12 Bottom and side transverse framing shall be provided which sufficiently supports the structure generally and locally.

5.3 DECK LAYOUT

- 5.3.1 Fully open vessel, primary aft working net deck with centerline helm console as far forward as possible and Bow rider step deck forward of the console.
- 5.3.2 The aft working deck shall have a net deck (shall support a 250kg net) flush with the top of the bulwark and extending across the full breadth of the boat. The length will start at the transom to within 18-20" of the aft side of the console. The area between the main deck and the net deck shall be accessible from the forward side for storage. The only protuberance through the net deck will be the Tow Post.
- 5.3.3 There will be 3 handholds on fwd side of net deck, spaced at equally across the breadth for passengers to grab.
- 5.3.4 There will not be helm and pilot seats.
- 5.3.5 Centre mounted console with all controls, adjusted for the height of a standing driver 5'-10" tall.
 - 5.3.5.1 The windshield must be fixed to console and wrap to half way on each side of console. The height of windshield must be adjusted for the height of the standing driver. The windshield must be fitted with proven manufacturers' aluminium framed windows of Laminated-Tempered Safety glass, Forward window are to be minimum 3/8" safety glass. Smaller side windows can be minimum 1/4" thick safety glass.
 - 5.3.5.2 Grab rails on the front and both of the outer sides of console for passengers for egress around the perimeter of the console. Vertical grab rails on left and right side of wheel and throttle controls for the operator during maneuvers.
- 5.3.6 The engine compartment shall be fully enclosed below the net deck, such that storage items below the net deck will not come into contact with the engine.
 - 5.3.6.1 The engine compartment shall have a powered blower with a dedicated fire port and fire extinguisher, mounted for easy access by the operator.

- 5.3.6.2 Access to the engine compartment will be by piano hinged checker plate hatch, flush when closed on the net deck with 2 recessed grabs one in each of the lifting corners. This access hatch will be long enough for easy access to engine and jet intake unit (3' to 4') and when closed will be smooth with the top of the net deck as to not impede fishing net deployment or retrieval. The piano hinge will be on the bow side of the opening.
- 5.3.6.3 The underside of the hatch and the vertical bulkheads of the compartment must have sound proofing sufficient to allow operators to communicate effectively while vessel underway, sound levels at cruise not to exceed 89 DBA..
- 5.3.6.4 The full edge of the hatch will fit into a channel which will drain water to outside of boat. Foam rubber will be fitted to the full edge of the hatch or to the channel to help stop vibration and to limit entry of water into the channel.
- 5.3.6.5 The engine compartment hatch shall have two gas filled shocks, suitable for a marine environment to hold the hatch open when required for access to stop the hatch from falling backwards onto deck.
- 5.3.6.6 The hatch shall be strong enough to support 2 people walking on it. All work to be free of burrs or snag points such that a net will not get caught on the net deck side.
- 5.3.7 A bow locker is required for anchor, cable and miscellaneous stowage configured as a step over the bow. Surface finish of the entire weather exposed decking forward of the aft side of the console must be non-skid/non-slip, SURE-FOOT GRAY, OR EQUAL.
- 5.3.8 Cockpit/weather deck drainage scuppers must be of a size to allow sufficient drainage of exposed deck surfaces per TP 1332 and ISO.
- 5.3.9 Top of bulwarks around the perimeter of the vessel must be flat across their whole width and a minimum of 175mm wide.
- 5.4 BELOW DECK**
- 5.4.1 Watertight and Tank Bulkheads: The hull design must be such that a sufficient number of compartments, or amount of flotation, including hull compartments, and / or low smoke and flame spread flotation foam, or fire retardant flotation, or flotation devices, will allow for adequate stability and positive buoyancy in a flooded condition. See references to vessel certification, re: TP 1332 / ISO testing.

6.0 OUTFIT GENERAL

6.1 HULL OUTFIT

- 6.1.1 A tow eye is to be incorporated into the stem such that it is flush with the stem. This is to allow the boat to bow up to rocks without getting hung up. It must be strong enough to tow the boat in calm water in a normal load condition, on an even keel, without damaging the boat. The tow eye must

also be suitable for trailer tie down, and located minimum 12 inches above waterline.

6.1.2 There will be at least 5 flush cleats along the side deck / transom (1 forward, 2 mid ship, 2 aft); with an anchoring bit /cleat fitted on the bow of the vessel. The 2 aft to be located on the transom stern and not on the gunwale. The 2 mid ship must be located between the end of the net deck and the side of the console

6.1.3 Deck space aft of cockpit to be fitted with a removable tow post to be installed into the center of the net deck athwartships and 1.5' aft of the forward end of net deck where driver would sit to rest. The Tow Post must be a cruciform style and extend 32" above the top of the net deck. The bottom retaining socket shall be integrated into the boats bottom structure. The post and base are to be rated for 3000 lb (1360 kg) Safe Working Load (SWL) and be permanently stamped into the tow post and be clearly visible to the operator. The builder shall supply a tow post storage location below the net deck to positively retain the tow post during transport.

6.1.4 Aft end/netting protection

6.1.4.1 Tubing guard running vertical on each side of "EZ Clean" grate stomper from edge of swim grid to near top of transom (to stop net from catching stomper.)

6.1.4.2 Tubing guard running vertical on each side of jet unit running from underside of swim grid to transom on the inner side of trim tab (to prevent net from catching on jet unit).

6.1.4.3 Air vents if mounted near stern to be mounted on transom so the net does not catch on vents.

6.1.4.4 Gas fill-up fitting to be installed at least 7 ft forward of the transom (to avoid catching the net) This guard must be fabricated so as to be easily removed to facilitate the removal of the jet leg.

6.1.5 Vessel shall be equipped with securing eyes fitted to the outside of the transom used for trailer tie downs and used to secure boat for tie up.

6.1.6 Low profile pipe railings to be installed at sheer from windshield forward to break at bow. Railings must be socket style removable and flush with top of bulwark when removed.

6.2 DECK OUTFIT

6.2.1 Vessel shall be outfitted with navigation lighting, and antennas, mounted on console. All around light to be removable and when removed, fixture flush with deck.

6.2.2 Console dash layout is to be arranged in an ergonomic manner, to provide easy access to controls, electrical panels and easy viewing of navigation and propulsion instruments. The console is to be robustly constructed to eliminate flex from operators holding points, and equipped with a steering system specified for the motor (Mercury steering system).

6.2.2.1 A single windshield wiper must be installed with on/off/variable switch mounted on the console.

6.2.2.2

- 6.2.2.3 A lockable storage compartment must be included within the console for easy access by the operator
- 6.2.2.4 In addition a weathertight access panel shall be installed in the forward face of the console for easy access to console outfitting.
- 6.2.2.5 A 'cigarette lighter' power point is to be installed on the port dash, with a lockable storage 'glove box'.
- 6.2.2.6 The operator's helm is to be located to centre and equipped with all appropriate gauges as recommended by the propulsion system manufacturer, as listed in 'Outfitting'. A dimmer switch is to service all dash lighting. Compass light to have separate control.
- 6.2.2.7 A searchlight (Marinco Spotlight, Model # SPL12W with SPLR-3 Control head or equal) must be supplied and mounted on a removable pole. Primary mount location is on forward side of the console, STBD side at a height of 6" above the top of the windshield. Two secondary mount locations must be provided at ¾ length of the vessel from the transom on the outboard port and STBD sides.
- 6.2.3** The deck above the watertight compartments must have bolted, watertight access plates / hatches for easy removal to allow for repair of tanks and buoyancy compartments beneath, and separate cover plates for inspection access to the fuel system components as well as quick accesses for utilities and as required by TP1332.
- 6.2.4** Two removable weather proof canvas covers shall be provided, one for the console and a second to encompass the entire boat with tow post removed and stored. The covers must provide weather protection and be easily installed or removed. The cover for the entire boat cannot utilize snaps from midships aft due to the potential of snagging the fishing net during deployment and retrieval, therefore, the contractor must identify a method of fastening that will not impede these operations.

6.3 LIFESAVING & EMERGENCY EQUIPMENT

The following items must be provided with appropriate stowage / securing arrangements (as appropriate for each item). All fittings, Contractor supplied, must be heavy duty, corrosion resistant 316 stainless steel fittings. All items must be readily accessible (the foot pump and the repair kits must be stowed in a stowage locker). All items must be readily accessible.

- 6.3.1** A water-resistant flashlight and a set of spare batteries.
- 6.3.2** Two (2) wooden paddles
- 6.3.3** One extinguisher (Class 5BC, marine type) with mounting bracket installed on craft
- 6.3.4** Anchor (Fortress FX7 model or equivalent) with 50 feet of ¾ line and a galvanized chain
- 6.3.5** Sea anchor and Line
- 6.3.6** Four (4) 25-foot mooring lines
- 6.3.7** Four (4) 6 inch diameter fenders
- 6.3.8** Transport Canada approved First aid kit
- 6.3.9** Air horn
- 6.3.10** Buoyant heaving line of at least 10 meters

- 6.3.11** Six (6) TCMSB approved flares, among which at least 3 of which to be type A, B or C.

7.0 SYSTEMS GENERAL

7.1 PROPULSION

- 7.1.1** The boat is to be powered by a 200 HP Mercury Optimax Jet
- 7.1.1.1** The Mercury Optimax Jet unit, only, will be Government Supplied Material [GSM], all ancillary equipment and installation materials including, but not limited to those listed below, must be Contractor Furnished Materials [CFM].
- 7.1.2** Jet drive intake skid plate (QT-100) and heavy duty 'EZ Clean' grate must be incorporated include an EZ Clean grate stamper clean out system and Heavy Duty Pump guard.
- 7.1.3** Motor must be installed in accordance with manufacturer's recommendations. Installations of the engine(s), controls, lubrication and fuel systems, battery connections, etc. must be verified by an authorized Mercury representative.
- 7.1.4** The combined engine control is to be supplied and installed at the time of construction according to the Mercury manufacturer's specifications. The installation is to use all motor control cables and electrical harnesses from the Mercury motor manufacturer. The control is to be equipped with a motor kill switch.
- 7.1.5** Impeller must be Stainless Steel.
- 7.1.6** Contractor to supply and install a Stainless Steel wear ring.

7.2 CONTROLS

- 7.2.1** Manufacturer must install any of the following equipment included in the manufacturers' standard and optional gauge package (e.g. Mercury Smart Craft) for the specified engine.
- 7.2.1.1** Tachometer for engine.
- 7.2.1.2** Temperature, Fuel, Oil Pressure, Hour and Volt gauges.
- 7.2.1.3** Controls, mounted at starboard side of console.
- 7.2.1.4** Ignition harness (mounted so that the key cannot collect water). Propulsion control system installation must include a binnacle engine control located on the starboard side of the helm console. The controls must conform to engine manufacturer's recommendations and must not interfere with any of the other controls.
- 7.2.2** Engine package must incorporate a lanyard style safety shutdown feature (kill switch) for the engines, to be mounted near the ignition switch.

7.3 ALARMS

- 7.3.1** Monitoring system for the engine must include the following alarms
- 7.3.2** Oil level gauge, for the remote tank
- 7.3.3** Coolant flow alarm, if applicable
- 7.3.4** Engine overheat/high temperature alarm

7.4 VERIFICATION OF INSTALATION

Installation of the motor, controls, lubrication and fuel systems, manometers, battery connections, are to be verified by an authorized technician. The motor is to be started by the authorized technician, who must provide a written report with a copy for the Technical Authority.

7.5 ENGINE BREAK-IN

The Contractor is to respect the engine manufacturer's break-in procedures.

7.6 PROTECTION OF CONTROLS

All control cables, electrical wiring for the motor and the steering hydraulic hoses are to be installed in UV resistant plastic pipes (LOOM) or equal. These pipes are to be installed in such a manner as to ensure that no cable is immersed in water.

7.7 STEERING

7.7.1 Steering systems must be as recommended by Mercury for this engine with a maximum of 1 wheel turn from hard over to hard over (270 degrees from lock to lock)

7.7.2 The Steering wheel must be Aluminum and covered with Thermoplastic antishock material, 13.8" diameter with a removable stainless steel knob. (UltraFlex steering wheels meet these requirements)

7.8 FUEL SYSTEM

The complete fuel systems must be supplied, installed, labeled and tested in accordance with Section 7 of TP 1332 and ABYC specifications.

7.8.1 The fuel system must include a Racor filter/separator suitable for fuel supply.

7.8.2 All fuel valves must be readily accessible and labeled as per TCMSB TP 1332.

7.8.3 Fuel filling must be located to be accessible and designed to catch fuel from over filling or blow back, so that the fuel does not enter the vessel as per TCMSB TP 1332 requirements.

7.8.4 Remote fuel shutoff valves must be installed in accordance with TP1332 and ABYC requirements, remote from the fuel tanks and engine compartments. Labeled as per TCMSB TP 1332 requirements.

7.8.5 Fuel tank vent pipes are to be equipped with a non-return check valve.

7.9 FUEL TANK

7.9.1 The vessel must be fitted with one (1) fuel tank with baffles as necessary.

7.9.2 The tank must be aluminum and fitted below the deck.

7.9.3 The total capacity must be a minimum of eighty liters (80) liters.

7.9.4 Fuel Tanks are to be hydrostatically tested, or air tested to 3.0 p.s.i. and be labelled per the requirements of TP1332.

7.9.5 Fuel tank(s) must be fitted with fuel level/capacity sender unit and a gauge on the dash of the console for the operator.

7.10 ELECTRICAL SYSTEM

The electrical system design, component selection and installation must be in accordance with Canadian Standards Association C22.2 NO. 183.2-M1983 (R1999) "Standards for D.C. Electrical Installations on Boats", and TP1332 and/or ABYC 'E' as referenced by TP1332. All electrical equipment and hardware must be installed in accordance with the manufacturer's specifications. Electrical equipment identified as required to be waterproof (e.g. console switch panel) will be deemed acceptable if it meets with IP66. Incorporating a waterproof breaker

panel with a minimum of 10 circuits fitted. The Contractor must ensure that the breaker panel has 10% expansion room or a minimum of 2 spare breakers (whichever option is greater).

7.10.1 Twelve Volt (12V) DC distribution system must be provided to power the engine starting and boat service loads including:

- 7.10.1.1 Navigation lights;
- 7.10.1.2 Exterior Lighting;
- 7.10.1.3 Navigational equipment;
- 7.10.1.4 Instrumentation;
- 7.10.1.5 Bilge Pumps;
- 7.10.1.6 Electronics; and
- 7.10.1.7 Communications

7.10.2 All fitted electrical equipment must be capable of operating simultaneously with any other fitted electronics equipment without causing interference to any electronic equipment or to the magnetic compass.

7.10.3 All electrical equipment must be readily accessible for performing maintenance.

7.10.4 Two (2) marine quality 12V power outlets must be installed on or near Operator's console.

7.10.5 CABLES

7.10.5.1 Cables must be grouped into wiring harnesses wherever possible. All wiring harnesses must be routed through protective conduit pipe. Where impractical cables and conductors must be supported with clamps or straps at least every 18 inches on horizontal runs and every 14 inches on vertical runs.

7.10.5.2 Cabling / conductors passing through watertight boundaries, decks, bulkheads or other exposed surfaces must be installed to maintain watertight integrity of the structure. Cable entry into watertight enclosures must be through watertight marine glands of suitable size.

7.10.5.3 Cabling / conductors passing through structures without watertight glands, must be protected against chafing by the use of abrasive resistant grommets.

7.10.5.4 Routing cables through foamed spaces must be avoided wherever possible. Cables that must be routed through foamed spaces must be run in PVC conduit pipe. The pipe must be arranged in a manner that prevents water from becoming entrapped in the pipe.

7.10.6 Batteries, Switches:

7.10.6.1 The boat is to be equipped with a system of two type M30MF deep-cycle batteries with a selector switch and connected in accordance with the motor manufacturer's technical specifications.

7.10.6.2 Batteries must be marine grade glass mat or gel type maintenance free to eliminate leakage, and a minimum 800 deep-cycle cranking amps.

7.10.6.3 Battery switches must be recessed to prevent snagging or accidental switching.

7.10.6.4 Battery compartments must be weathertight and fitted with a suitable means of venting.

7.10.7 Bilge Blower: The boat must be fitted with a 12V DC bilge blower system in accordance with TP 1332 and ABYC specifications. The bilge blower system must be controlled by a separate watertight switch and fuse located at the operator's console.

7.10.8 Lighting:

7.10.8.1 Backscatter of console lights must be minimized in the design. In all cases, progressive marine grade dimmers must be fitted wherever practicable, with the capability of dimming engine monitoring gauges and other indicators separately from compass illumination.

7.10.8.2 Navigation lighting must conform to CSA Collision Regulations.

7.10.9 Pumping and Drainage

7.10.9.1 Electric bilge pump with 1500 gallons per hour (gph) capacity must be fitted in each watertight division as well as a fixed manual operated diaphragm type bilge pump. The bilge pump must be located so that it takes suction from the lowest point of the hull. Piping will allow the bilge pump to discharge directly overboard. An automatic control must be fitted that turns on the electric bilge pump when water is present in the bilge. The electric bilge pump control switch must be located on the operator's console, with settings for 'on', 'off' and 'automatic' operation. An indicator light and an audible alarm must be installed at the console that lights when the bilge pump is operating. Bilge pump(s) must be wired direct to battery, so that it is constantly active as per TCMSB TP 1332 requirements.

7.10.9.2 Hull drainage - a non-corrosive threaded plug must be provided in the lowest point to drain the hull when out of the water.

7.10.9.3 Valves and handles must be bronze or stainless steel and must be located where they are readily accessible for operation, maintenance or removal.

7.10.10 Piping Systems

7.10.10.1 Flexible Connections - Where flexible connections are required for steering and fuel systems, suitable hose with permanently crimped, detachable reusable type fittings must be used.

7.10.10.2 Fuel System must be hydrostatically tested, or air tested to 3.0 psi. and be labelled per the requirements of TP1332.

7.10.10.3 Fittings and clamps must be stainless steel. Bolts used in all fittings must be Type 316 stainless steel.

7.10.10.4 Each watertight Hull compartment is to have its own 12V DC bilge pump, plumbed to discharge overboard from the compartment, as per TP1332.

7.11 NAVIGATION EQUIPMENT (COLREGS)

[http://www.tc.gc.ca/acts-](http://www.tc.gc.ca/acts-regulations/GENERAL/C/csa/regulations/010/csa014/csa14.html)

[regulations/GENERAL/C/csa/regulations/010/csa014/csa14.html](http://www.tc.gc.ca/acts-regulations/GENERAL/C/csa/regulations/010/csa014/csa14.html)

The following must be Contractor supplied and fitted:

- 7.11.1 Navigation lighting fixtures must be of such a design as to resist the effects of vibration and moisture and must be provided with adequate protection from damage.
- 7.11.2 Particular COLREGS rules to note (vessels under 12 M.); Rules 22, 23, and Annex 1, rules 2, 9, and 10. (NOTE: The lights must be installed parallel to the "Normal Load" waterline that often may not be parallel to the deck.)
- 7.11.3 The navigation lights must be mounted so as not to interfere with vision of the operator.
- 7.11.4 The navigation lights must be permanently mounted.
- 7.11.5 The Contractor must supply and install an electric horn that ensures the requirements of the Collision Regulations, Rule 32 are met, i.e. with a standard small vessel 'horn' audible 0.5 NM. The horn must be installed on the vessel exterior with the 'horn' facing forward. The horn must be operated by a spring-loaded switch located on the operators' console. The "Signaltone", or Ongaro electric horns meet this requirement.
- 7.11.6 A Magnetic Compass must be mounted near the centreline of the helm station, in easy view of the operator when facing forward. (The Ritchie Helmsman 70 series meets this requirement.)

7.12 PAINTING AND CORROSION PROTECTION

- 7.12.1 The hull above the waterline must be painted dark green and inside of bulwarks must be bare aluminum with a marine clear coat and UV protector, excepting where "checker plate" is specified or otherwise coated or protected below.
- 7.12.2 Deck finish and top of bulwarks forward of net deck to be non-skid paint system, SURE-FOOT GRAY or Equal and must cover the entire deck/bulwark except waterways and fittings.
- 7.12.3 Top of bulwarks from forward edge of net deck around the perimeter of the transom must be bare aluminum with a marine clear coat and UV protector.
- 7.12.4 Console finish/painting: Zolotone granite or equal.
- 7.12.5 Prior to delivery the Contractor must ensure that all non-painted exposed aluminium is free of cosmetic blemishes, including all construction marks, scratches, gouges and stains.

7.13 WARRANTY AND SERVICE PROVISIONS

Warranty and service provisions are defined in the Contract.

8.0 TESTS & TRIALS

The Contractor must conduct their own inspections, tests and trials to verify successful completion of the Work in accordance with this TSOR and the proper operation of the vessel and all associated equipment. The requirements for inspections, tests and trials and associated deliverable documentation are defined in the Contract and Annexes to the Contract including any test, trials or sample reports attached thereto. All discrepancies identified through the inspection, test and trials processes must be corrected prior to delivery.

- 8.1.1 The Contractor must, as a minimum, inspect and test the following items for adherence to the contract requirements and proper operation (proper

operation means that the equipment can be started, operated, connected together and demonstrated to function in a normal fashion, as applicable). The inspections and tests listed herein are minimums and are not intended to supplant any controls, examinations, inspections or tests normally employed by the Contractor to assure the quality of the vessel:

- 8.1.1.1 Weight
- 8.1.1.2 Construction Quality
- 8.1.1.3 Lifting Gear, if applicable
- 8.1.1.4 Propulsion Engines, including starting
- 8.1.1.5 Propulsion Controls
- 8.1.1.6 Steering System
- 8.1.1.7 Fuel System
- 8.1.1.8 Electrical System
- 8.1.1.9 Electronics

8.1.2 Sea Trials

The minimum acceptable sea trial and report is as attached hereto, ATTACHMENT I OF APPENDIX II.

- 8.1.3 Stability examination per TCMSB TP1332 will require the Contractor to record all stability calculation and trial results and provide a copy for each craft produced, to be placed in the technical manual, and two (2) copies for the Technical Authority.

8.1.4 Trial Records and Reports:

The requirements for recording and maintaining trials records are given in the Contract and applicable Annexes

8.1.5 Deliverable Documentation:

The requirements for deliverable documentation are given in the Contract and applicable Annexes.

9.0 **BUILDER'S PLATE**

9.1 NATIONAL ASSET CODE

- 9.1.1 The National Asset Code for this vessel are as follows:

9.1.1.1 **VZE25**, delivery to 4217 Argonaut Road Campbell River, British Columbia V9H 1P3. Contact to be supplied after contract award.

- 9.1.2 The contractor must add this 5 character code to the builder's plate of each vessel with the prefix "National Asset Code".

9.2 BUILDER'S PLATE

- 9.2.1 A Builder's Plate must be affixed to each asset in a readily visible location, e.g. for a boat, in way of the helm position, for a trailer on the left side of the tongue.
- 9.2.2 The plate must be made of a weather resistant material compatible with that to which it is affixed.
- 9.2.3 The dimensions of the plate must be not less than 200mm x 125mm
- 9.2.4 The plate must contain the following information, permanently etched:
 - 9.2.4.1 National Asset Code;
 - 9.2.4.2 Naval Architect/Designer;

- 9.2.4.3 Builder;
- 9.2.4.4 Hull Number;
- 9.2.4.5 Year of Construction;
- 9.2.4.6 Lightship Weight in kilograms.

9.2.5 The Builder's Plate must be in both official languages.

10.0 SHIPPING AND DELIVERY

Prior to shipping, the boat is to be cleaned, appropriately protected and covered in accordance with the instructions specified in this section.

- 10.1** Prior to shipping, the boats must be secured on their respective trailers, cleaned, preserved and covered in accordance with this section. All areas of the boat are to be cleaned prior to covering for shipping. Bilges are to be dry and free of oil and debris and the fuel tanks must be full with fuel stabilizer added.
- 10.2** The propulsion system must be preserved in accordance with the manufacturer's recommendations for storage of up to one year in an environment that will be subjected to freezing temperatures.
- 10.3** The batteries are to be disconnected. A warning plate is to be tied to the steering wheel with a wire indicating that the boat has been protected for shipping and storage and must not be started until the propulsion machinery has been reactivated.
- 10.4** All contact points with the boat are to be padded. A shrink wrap cover is to be provided to protect the boat during shipping and storage.
- 10.5** Means of Delivery: For a delivery distance not exceeding 1000 km the Contractor may deliver the vessel/trailer combination on the trailer. Where the delivery distance exceeds 1000 km the trailer may not be utilized as means of delivery

11.0 TRAILER

- 11.1** The Contractor must supply a dual axle trailer to fit the boat, welded galvanized construction and be rated at least 20% over the anticipated 'normal load' weight of the boat. The trailer must be certified commercial requirements in accordance with Department of Transport regulations for towing the vessel, and be constructed and equipped with the following:
 - 11.1.1** Trailer to be equipped with axle bearing protection, grease nipple, and flush out kit.
 - 11.1.2** Brake and turn signal lighting, with 5-prong flat wiring connector. The lighting system must be submersible. (Note requirement for other connector if required for the equipment listed for trailer).
 - 11.1.3** Hydraulic surge type, jurisdiction compliant braking system.
 - 11.1.4** Manual bow winch assembly with winch strap and non-corroding snap hook, bow chock, and swivel tongue jack, with wheel. The winch must be of adequate size to launch and recover the vessel and fitted with anti-reverse mechanism.
 - 11.1.5** Heavy-duty 'stand-on' fenders and hitch to accommodate a 2 inch ball;
 - 11.1.6** Bunks and wheel mounted spare tire and carrier, with lug wrench; and side loading guides aft.
 - 11.1.7** Class III weight distributing hitch compliant.

11.2 The contractor must record the trailer sales and registration information and provide the information in each vessel manual.

12.0 PROJECT MANAGEMENT

Project Management requirements are defined in the Contract and applicable Annexes.

Requirements for detailed technical drawings and other production information including a detailed production schedule are defined in the Contract and applicable Annexes.

APPENDIX I

Final Deliverable Data Package

The Final Data Package which must be delivered to Canada is as defined in the Contract, but must include, as a minimum the technical publications identified in this appendix.

1.0 Comprehensive Owner/Operator Manuals

1.1 Deliverables

- 1.1.1 One (1) complete hard copy and one (1) complete CD electronic copy set of the manuals per vessel delivered for the operator of each vessel, to be delivered with the vessel.
- 1.1.2 One (1) complete hard copy and one (1) complete CD electronic copy set of the manuals per vessel delivered for the Technical Authority, to be delivered to the same address identified for invoices.

1.2 Content

The manuals must provide a physical and functional description of the craft, its machinery and equipment, as well as delivery testing and sea trial result documentation. The manuals must include as a minimum the following three sections and as detailed below:

- General Information
- Technical Information
- Spare Parts List

1.2.1 GENERAL INFORMATION SECTION

The General Information Section must include a description of the arrangement and function of all structures, systems, fittings and accessories that comprise the boat, with illustrations as appropriate:

- 1.2.1.1 Operating procedures;
- 1.2.1.2 Basic operating characteristics (such as temperatures, pressures, flow rates)
- 1.2.1.3 Installation criteria and drawings, assembly and disassembly instructions with comprehensive illustrations showing each step;
- 1.2.1.4 Recommended planned maintenance; and
- 1.2.1.5 Complete troubleshooting procedures.

1.2.2 TECHNICAL INFORMATION SECTION

The Technical Information Section a complete set of detailed owner / operator instructions, drawings (Section 15), parts lists and supplemental data for all components of the boat (whether acquired from external sources or custom-manufactured).

- 1.2.2.1 "As Fitted", dimensioned drawings must be produced for manuals to record the vessel particulars.
- 1.2.2.2 Plan and Profile, showing the General arrangement; and
- 1.2.2.3 Indication of the Systems arrangement presented with the above drawings covering Bilge, Fuel, Electrical, and propulsion installations.
- 1.2.2.4 Parts list must include the name, part number and serial number if applicable of the parts, items or components and must indicate the supplier (name, address, phone number, email address) of this part, equipment or component and in which part of the specification the item appears.
- 1.2.2.5 Hull Serial Number (HIN), copy of builders plate, TEST and TRIAL results as per completed Attachment 1 of Appendix II, serial or manufacturer's numbers, and equipment warranty cards.
- 1.2.2.6 Engine(s) and equipment: including engine and propulsion serial numbers.
- 1.2.2.7 Acceptance Certificates, and compliance sheets or certificates distributed with equipment i.e. life saving appliances, lifting appliances, engine test reports, calibration certificates, Nav light certificates, Fire suppression material certificates, flotation foam rating sheets
- 1.2.2.8 Pre-trial shop Testing Check Sheet.
- 1.2.2.9 Electronics, (if applicable): including model and serial numbers.
- 1.2.2.10 Regulatory and Stability documentation: as required per TP 1332, which, references ISO12217 or ISO 6185 for RIBs (if applicable).

1.2.3 SPARE PARTS LIST SECTION

The Spare Parts List section must include a list of recommended initial onboard spare parts to be stocked for the vessel. The list must include the name, part number and serial number if applicable of the parts, items or components and must indicate the supplier (name, address, phone number, email address) of this part, equipment or component and in which part of the TSOR the item appears. At a minimum this list must include the following items (as applicable):

- 1.2.3.1 Propulsion: Propellers, filters, water pump impeller, batteries, throttle and shift cables, special engine tools.
- 1.2.3.2 Electrical: panel breakers, fuses, light bulbs;
- 1.2.3.3 Boat Structures and Fittings: Miscellaneous commonly used fasteners.

2.0 ADDITIONAL DELIVERABLE DOCUMENTATION

The following additional documentation must be delivered with each vessel:

2.1 Tonnage Registration Certificate in accordance with TP 13430 -

<http://www.tc.gc.ca/eng/marinesafety/svcp-gt-3948.htm>

2.2 A completed and signed copy of the Small Vessel Compliance Program SVCP for the vessel delivered. Website: <http://www.tc.gc.ca/eng/marinesafety/svcp-menu-3633.htm>

2.3 Two Bill of Sales per vessel delivered, one for the vessel and a second for the

Solicitation No. - N° de l'invitation
F7047-150016 /A
Client Ref. No. - N° de réf. du client
F7047-150016

Amd. No. - N° de la modif.
File No. - N° du dossier
XLV-5-38088

Buyer ID - Id de l'acheteur
xlV166
CCC No./N° CCC - FMS No./N° VME

trailer with a valid Motor Vehicle Registration Certificate for the relevant Province of delivery.

5.8-5.99m Aluminum Jetboat

Jul 25, 2015

File: TSOR_E F7047-150016_Rev0 for solitation
0

24

Revision

APPENDIX II

Sea Trials

- 1.0** Sea trials must be conducted by the Contractor to demonstrate the vessel and its equipment conform to the requirements as stated in the Contract. All expenses incident to the trials must be borne by the Contractor, including fuel unless otherwise specified. A crew provided by the Contractor must operate the vessel during sea trials. Residual fuel, if not drained for shipping, must be delivered in its tank with the vessel.
- 2.0** All Sea Trial instrumentation and equipment must be furnished and operated by the Contractor. Trial instrumentation, where applicable, must not replace the vessel's instruments (e.g., engine tachometer, pressure gauges, and thermometers). The Contractor must furnish all necessary hardware and fittings and must install the measuring devices. After satisfactory completion of the trials, all instrumentation must be removed and all systems restored to their original condition. The Contractor must provide two (2) copies of the calibration data certifying the accuracy of the instrumentation for the tests and include it in the technical publications
- 3.0** The Contractor must submit a Test & Trials Plan, including a description of all of the acceptance trials to be performed. As a minimum, Using Attachment I, modified to suit these vessels, the following trials must be conducted: (the vessel must operate in the Normal Load Condition.)
 - 3.1.1** Speed Trials - The speed trials must be done over a course at least one (1) nautical mile in length. Two (2) runs must be made over the course, one (1) in each direction with the speeds for the two (2) runs averaged. The use of GPS data (averaged) is acceptable.
 - 3.1.2** Endurance Trial - The boat must operate at maximum speed for a minimum of ten (10) minute intervals in the Fully Loaded Condition over one (1) hour period considering the break in procedures of the equipment. During the endurance trials, it must be demonstrated that all parts of the propulsion system are in full operation. All systems must be operated to check for proper lubrication, control and alignment. Fuel consumption must be recorded for the one-hour trial
 - 3.1.3** Astern Propulsion - The vessel must be operated and manoeuvred using astern propulsion to establish the astern performance. During the backing performance tests the throttles must be set to provide 1/3 of the rated engine horsepower. In order to demonstrate astern performance of the engines in an emergency stop and to test the strength of the foundations, the engine must be subjected to two stops from full power ahead at maximum speed to dead in the water using reverse thrust. Time required to perform this trial must be recorded.
 - 3.1.4** Steering Gear - Tests must be conducted on the steering gear to demonstrate the adequacy of the steering system under all operations. Manoeuvring tests must be performed to ensure that the vessel meets the

stated requirements. Manoeuvring trials must be conducted in the Normal Load Condition and repeated in the Full Load Condition.

- 3.1.5** The Contractor must provide a Tests & Trials Sheet, (Attachment 1) for each boat and include this sheet in the technical publications.
- 3.1.6** Public Works and Government Services Canada Contract Authority and Technical Authority must be notified no less than 2 weeks prior to sea trials. The Technical Authority will witness and attend the sea trials. Sea trial results must be forwarded to the Technical Authority prior to delivery of the vessel.
- 3.1.7** At the conclusion of sea trials each vessel must be thoroughly cleaned and inspected. Engine cooling systems must be flushed through with fresh water. The Contractor must repair any damage to the vessel or ancillary equipment resulting from sea trials, to the satisfaction of the Technical Authority.
- 3.1.8** For the purpose of the trials, Normal Loaded Condition must be considered to be the basic vessel, fitted with all normal equipment, full fuel, with complement and loads per Vessel Particulars, (see section 4.1.9).

APPENDIX II, ATTACHMENT 1
SMALL CRAFT / VESSEL TESTS & TRIALS SHEET
CONTRACT # F7047-150016

Small Craft / Vessel Builder:			
Small Craft / Vessel Description:			
Hull Identification Number:			
National Asset Code:			
Date of Trials:			
Personnel in Attendance:			
Builder			
PWGSC			
DFO			
DFO			
Time: _____ hrs Departing from _____			
Small Craft / Vessel Weights:	Dry Weight of Hull with cabin:		_____ lbs/ _____ kg
	Furnishings & Fittings:		_____ lbs/ _____ kg
	Engines & Equipment:		_____ lbs/ _____ kg
	Fuel:	Fuel:	
	Imp gal	Litres	_____ lbs/ _____ kg
	Total Weight of Small Craft/Vessel:		_____ lbs/ _____ kg
	Number of Crew _____ and operating equipment:		_____ lbs/ _____ kg
	Test Total Laden Weight:		_____ lbs/ _____ kg
	Trailer weight:		_____ lbs/ _____ kg
Boat & Trailer weight:		_____ lbs/ _____ kg	

Motors: Starting - Operation "IDENTIFY INBOARD/OUTBOARDS"	Port	<input type="radio"/> Immediate, Yes / No
	Starboard	<input type="radio"/> Immediate, Yes / No
Propellers/Impellers	Pitch	_____
	Diameter	_____
	No. of Blades	_____
	Stainless Steel or Aluminum	<input type="radio"/> S/S ___ AL
Static Attitude & Trim:		
Weather Conditions: Refer to attached Beaufort Wind Scale. BWS No. _____		
Speed Trials	Speed Required _____ - _____ knots	
	Cruising Speed: measured mile 1 way	_____ kts @ _____ rpm
	Cruising Speed: measured mile return	_____ kts @ _____ rpm
	Averaged Cruising Speed:	_____ kts @ _____ rpm
	Maximum Speed: measured mile 1 way	_____ kts @ _____ rpm
	Maximum Speed: measured mile return	_____ kts @ _____ rpm
	Average Maximum Speed	_____ kts @ _____ rpm
Full Throttle	From dead stop to plane	_____ seconds
	From dead stop to 30 knots	_____ seconds
Astern Propulsion:	Straight line to 2000 rpm	<input type="radio"/> Issues, Yes / No
	Hard a-port	<input type="radio"/> Issues, Yes / No
	Hard a-starboard	<input type="radio"/> Issues, Yes / No
	Emergency stop	_____ seconds

Tubes (if applicable)	No. of Chambers	_____
	Semi-auto fill system	<input type="radio"/> Yes / No
	Time to fill all chambers	_____ seconds
Endurance Trials: X = gallons or Litres	Fuel consumption	
	Port & Starboard Motor: at cruise:	_____ X/hr @ _____ rpm
	Port & Starboard Motor: at full throttle:	_____ X/hr @ _____ rpm
Steering: Acceptable Y /N	Straight line	<input type="radio"/> Yes / No
	Hard-Port radius of turn. Full Throttle	_____ feet
	Hard-Stbd radius of turn. Full Throttle	_____ feet
	Lock to lock = 35 degrees pt. & stbd	<input type="radio"/> Yes / No
	Effective steering 0-5 knots	<input type="radio"/> Yes / No
	5-10 knots	<input type="radio"/> Yes / No
	20-30 knots	<input type="radio"/> Yes / No
	Full speed	<input type="radio"/> Yes / No
Outboard/Inboard Leg Trim Control:	From fully raised to fully lowered.	<input type="radio"/> Acceptable Yes / No
Trim Tab Operation:	Fully raised, fully lowered.	<input type="radio"/> Acceptable Yes / No
Engine Controls:	Start	<input type="radio"/> Issues, Yes / No
	Shift	<input type="radio"/> Issues, Yes / No
	Throttle	<input type="radio"/> Acceptable Yes / No
Engine Gauges:	Tachometer	<input type="radio"/> Acceptable Yes / No
	Fuel gauges	<input type="radio"/> Acceptable Yes / No
	Trim gauges	<input type="radio"/> Acceptable Yes / No

Engine Gauges:	Oil pressure	<input type="radio"/> Acceptable Yes / No
	Voltmeter	_____ volts
Cabin Sound Levels:	Cruising speed- door & windows closed	_____ dbA @ _____ rpm
	Cruising speed- door & windows open	_____ dbA @ _____ rpm
	Full speed- door & windows closed	_____ dbA @ _____ rpm
	Full speed- door and windows open	_____ dbA @ _____ rpm
Outboard/Inboard engine operation:	Starting	<input type="radio"/> Acceptable Yes / No
	Shifting	<input type="radio"/> Acceptable Yes / No
	Throttle	<input type="radio"/> Acceptable Yes / No
	Raise	<input type="radio"/> Acceptable Yes / No
	Lower	<input type="radio"/> Acceptable Yes / No
Loaded Vessel Drop Test:	If applicable	<input type="radio"/> Acceptable Yes / No
Lifting Bridle Certified:	If applicable	<input type="radio"/> Acceptable Yes / No
Rollover test	If applicable	<input type="radio"/> Acceptable Yes / No

NOTES

Beaufort Wind Scale Identifier

Force	Wind Speed		Descriptive Term	Effects Observed at Sea	Effects Observed on Land
	Km/h	Knots			
0	Less than 1	Less than 1	Calm	Sea surface like a mirror, but not necessarily flat.	Smoke rises vertically.
1	1 - 5	1 - 3	Light air	Ripples with the appearance of scales are formed, but without foam crests.	Direction of wind shown by smoke drift, but not wind vanes.
2	6 - 11	4 - 6	Light breeze	Small wavelets, still short but more pronounced. Crests do not break. When visibility good, horizon line always very clear.	Wind felt on face. Leaves rustle. Ordinary vane moved by wind.
3	12 - 19	7 - 10	Gentle breeze	Large wavelets. Crests begin to break. Foam of glassy appearance. Perhaps scattered whitecaps.	Leaves and small twigs in constant motion. Wind extends light flag.
4	20 - 28	11 - 16	Moderate breeze	Small waves, becoming longer. Fairly frequent whitecaps.	Raises dust and loose paper. Small branches are moved.
5	29 - 38	17 - 21	Fresh breeze	Moderate waves, taking a more pronounced long form. Many whitecaps are formed. Chance of some spray.	Small trees with leaves begin to sway. Crested wavelets form on inland waters.
6	39 - 49	22 - 27	Strong breeze	Large waves begin to form. The white foam crests are more extensive everywhere. Probably some spray.	Large branches in motion. Whistling heard in telephone wires. Umbrellas used with difficulty.
7	50 - 61	28 - 33	Near gale	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind.	Whole trees in motion. Inconvenience felt in walking against wind.
8	62 - 74	34 - 40	Gale	Moderately high waves of greater length. Edges of crests begin to break into the spindrift. The foam is blown in well-marked streaks along the direction of the wind.	Breaks twigs off trees. Generally impedes progress. Walking into wind almost impossible.
9	75 - 88	41 - 47	Strong gale	High waves. Dense streaks of foam along the direction of the wind. Crests of waves begin to topple, tumble and roll over. Spray may affect visibility.	Slight structural damage occurs, e.g. roofing shingles may become loose or blow off.
10	89 - 102	48 - 55	Storm	Very high waves with long overhanging crests. Dense white streaks of foam. Surface of the sea takes a white appearance. The tumbling of the sea becomes heavy and shock-like. Visibility affected.	Trees uprooted. Considerable structural damage occurs.
11	103 - 117	56 - 63	Violent storm	Exceptionally high waves. Sea completely covered with long white patches of foam. Visibility affected.	Widespread damage.
12	118 - 133	64 - 71	Hurricane	Air filled with foam and spray. Sea entirely white with foam. Visibility seriously impaired.	Rare. Severe widespread damage to vegetation and significant structural damage possible.



BEAUFORT FORCE 0
WIND SPEED: LESS THAN 1 KNOT
SEA: SEA LIKE A MIRROR



BEAUFORT FORCE 1
WIND SPEED: 1-3 KNOTS
SEA: WAVE HEIGHT 1M (3.25FT), RIPPLES WITH THE APPEARANCE OF SCALES, BUT WITHOUT FOAM CRESTS



BEAUFORT FORCE 2
WIND SPEED: 4-6 KNOTS
SEA: WAVE HEIGHT 2-3M (5-10FT), SMALL WAVELETS, CRESTS HAVE A GLASSY APPEARANCE AND DO NOT BREAK



BEAUFORT FORCE 4
WIND SPEED: 11-16 KNOTS
SEA: WAVE HEIGHT 1-1.5M (3.5-5.5FT), SMALL WAVES BECOMING LONGER, FAIRLY FREQUENT WHITE HORSES



BEAUFORT FORCE 5
WIND SPEED: 17-21 KNOTS
SEA: WAVE HEIGHT 2-3.5M (6-8FT), MODERATE WAVES TAKING MORE PRONOUNCED LONG FORM, MANY WHITE HORSES, CHANCE OF SOME SPRAY



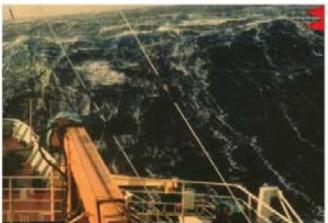
BEAUFORT FORCE 6
WIND SPEED: 22-27 KNOTS
SEA: WAVE HEIGHT 3-4M (9.5-13 FT), LARGER WAVES BEGIN TO FORM, SPRAY IS PRESENT, WHITE FOAM CRESTS ARE EVERYWHERE



BEAUFORT FORCE 7
WIND SPEED: 28-33 KNOTS
SEA: WAVE HEIGHT 4-5.5M (13.5-19 FT), SEA HEAPS UP, WHITE FOAM FROM BREAKING WAVES BEGINS TO BE BLOWN IN STREAKS ALONG THE WIND DIRECTION



BEAUFORT FORCE 8
WIND SPEED: 34-40 KNOTS
SEA: WAVE HEIGHT 5.5-7.5M (18-25FT), MODERATELY HIGH WAVES OF GREATER LENGTH, EDGES OF CRESTS BEGIN TO BREAK INTO THE SPINDRIFT, FOAM BLOWN IN WELL MARKED STREAKS ALONG WIND DIRECTION



BEAUFORT FORCE 9
WIND SPEED: 41-47 KNOTS
SEA: WAVE HEIGHT 7-10M (23-32FT), HIGH WAVES, DENSE STREAKS OF FOAM ALONG DIRECTION OF THE WIND, WAVE CRESTS BEGIN TO TOPPLE, TUMBLE, AND ROLL OVER, SPRAY MAY AFFECT VISIBILITY



BEAUFORT FORCE 10
WIND SPEED: 48-55 KNOTS
SEA: WAVE HEIGHT 8-13.5M (26-45FT), VERY HIGH WAVES WITH LONG OVERHANGING CRESTS, THE RESULTING FOAM, IN GREAT PATCHES, IS BLOWN IN DENSE WHITE STREAKS ALONG WIND DIRECTION, ON THE WHOLE, SEA SURFACE TAKES A WHITE APPEARANCE, TUMBLING OF THE SEA IS HEAVY AND SHOCK-LIKE, VISIBILITY AFFECTED



BEAUFORT FORCE 11
WIND SPEED: 56-63 KNOTS
SEA: WAVE HEIGHT 11.5-16M (37-52FT), EXCEPTIONALLY HIGH WAVES, SMALL-MEDIUM SIZED SHIPS MAY BE LOST TO VIEW BEHIND THE WAVES, SEA COMPLETELY COVERED WITH LONG WHITE PATCHES OF FOAM LYING ALONG WIND DIRECTION, EVERYWHERE, THE EDGES OF WAVE CRESTS ARE BLOWN INTO FROTH



BEAUFORT FORCE 12
WIND SPEED: 64 KNOTS
SEA: SEA COMPLETELY WHITE WITH DRIVING SPRAY, VISIBILITY VERY SERIOUSLY AFFECTED, THE AIR IS FILLED WITH FOAM AND SPRAY

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ANNEX B - BIDDERS' QUESTIONS AND CANADA'S RESPONSES

Solicitation # F7047-150016

REQUIREMENT: REQUEST FOR PROPOSALS (RFP): Fabrication and Delivery of 5.8 M to 5.99M Aluminium jet boat with centre stand up console and trailer for the Department of Fisheries and Oceans.

To be completed as required during the bid solicitation period.

Item	Spec-RFP description	Questions	Answers

ANNEX C - INSPECTION/QUALITY ASSURANCE/QUALITY CONTROL

1. Conduct of Inspection

- (a) Inspections will be conducted in accordance with the ITP provided and accepted by the Inspection Authority and as detailed in this Annex.
- (b) The Contractor must provide its own staff or subcontractors to conduct inspections, tests and trials; excepting that Technical Authority or Inspection Authority personnel may be designated in the specifications, in which case the Contractor must ensure that its own staff are provided in support of such inspection/test/trial.
- (c) As applicable, the Contractor must ensure that the required conditions stated in the specification prevail at the commencement of, and for the duration of, each inspection/test/trial.
- (d) The Contractor must ensure that personnel required for equipment operation and records taking during the inspection/test/trial are briefed and available at the start and throughout the duration of the inspection/test/trial. Tradesmen or FSRs who may be required to effect minor changes or adjustments in the installation must be available at short notice.
- (e) The Contractor is to coordinate the activities of all personnel taking part in each inspection/test/trial and ensure that safe conditions prevail throughout the inspection/test/trial.

2. Inspection Records and Reports

- (a) The Contractor on the inspection record, test or trials sheets as applicable must record the results of each inspection. The Contractor must maintain files of completed inspection records.
- (b) The Contractor's Quality Control (QC) representative (and the FSR when required) must sign as having witnessed the inspection, test or trial on the inspection record. The Contractor must forward originals of completed inspection records, together with completed test(s) and/or trials sheets to the Inspection Authority as they are completed.
- (c) Unsatisfactory inspection/test/trial results, for which corrective action cannot be completed during the normal course of the inspection/test/trial, will require the Contractor to establish and record the cause of the unsatisfactory condition to the satisfaction of the Inspection Authority. Canada representatives may assist in identification where appropriate.
- (d) Corrective action to remove cause of unsatisfactory inspections must be submitted to the Contracting Authority and to the Inspection Authority in writing by the Contractor, for approval before affecting such repairs and rescheduling of the unsatisfactory inspection/test/trial. Such notices must be included in the final records passed to the Contracting Authority and to the Inspection Authority.
- (e) The Contractor must undertake rectification of defects and deficiencies in the Contractor's installation or repair as soon as practicable. The Contractor is responsible to schedule such repairs at its own risk.
- (f) The Contractor must reschedule unsatisfactory inspections after any required repairs have been completed.
- (g) Quality Control, Inspection and Test records that substantiate conformance to the specified requirements, including records of corrective actions, must be retained by the Contractor for three (3) years from the date of completion or termination of the Contract and must be made available to the Contracting Authority and to the Inspection Authority upon request.

3. Inspection and Trials Process

3.1 Drawings and Purchase Orders

- (a) Upon receipt of two (2) copies of each drawing or purchase order, the designated Inspection Authority will review its content against the provisions of the SOW. Where discrepancies are noted, the Inspection Authority will formally advise all concerned, in writing using a Discrepancy Notice. The resolution of any such discrepancy is a matter for consultation between the Contractor and other Government of Canada Authorities.

3.2 Inspection

- (a) Upon receipt and acceptance of the Contractor's ITP, inspection will consist of a number of Inspection Points supplemented by such other inspections, tests, demonstrations and trials as may be deemed necessary by the Inspection Authority to permit him to certify that the work has been performed in compliance with the provisions of the specification. The Contractor must be responsible for notifying the designated Inspection Authority of when the work will be available for inspection, sufficiently in advance to permit the designated Inspection Authority to arrange for the appropriate inspection.
- (b) The Inspection Authority will inspect the materials, equipment and work throughout the project against the provisions of the specification and, where non-conformances are noted, will issue appropriate INSPECTION NON-CONFORMANCE REPORTS.
- (c) The Contract requires the implementation of a Quality Assurance/Quality Control system, so the Inspection authority must require that the Contractor provide a copy of its internal inspection report pertaining to a work item before conducting the requested inspection. If third party inspections are required by the Contract (e.g. inspections by a certified CWB 178.2 welding inspector), the reports of these inspections are required before the Work is inspected by the Inspection Authority.
- (d) The QA/QC system is a requirement, so if the documentation is presented to the Inspection Authority before an inspection stating that the Work is satisfactory but the Inspection Authority finds that the Work has not been satisfactorily inspected, the Inspection Authority must issue an Inspection Non-conformance Report against the Work and another against the failure of the Contractor's QA/QC system.
- (e) Before carrying out any inspection, the Inspection Authority must review the requirements for the Work and the acceptance and/or rejection standards to be applied. Where more than one standard or requirement is called up and they are potentially conflicting, the Inspection Authority must refer to the order of precedence in the Contract to determine the standard or requirement to be applied.

3.3 Inspection Non-conformance report

- (a) An Inspection Non-conformance report will be issued for each non-conformance noted by the Inspection Authority. Each report will be uniquely numbered for reference purposes, will be signed and dated by the Inspection Authority, and will describe the non-conformance.
- (b) When the non-conformance has been corrected by the Contractor and has been re-inspected and accepted by the Inspection Authority, the Inspection Authority will complete the Report by adding an applicable signed and dated notation.
- (c) At the end of the project, the content of all Inspection Non-conformance Reports which have not been signed-off by the Inspection Authority will be transferred to the Acceptance documents before the Inspection Authority's certification of such documents.

3.4 Tests, Trials, and Demonstrations

- (a) To enable the Inspection Authority to certify that the Work has been performed satisfactorily, in accordance with the Contract and specifications, the Contractor must schedule, co-ordinate, perform, and record all specified tests, trials and demonstrations required by the Inspection

Authority and the Specifications and any additional tests and trials performed by the Contractor required by the Inspection Authority.

- (b) Where the specifications contain a specific performance requirement for any component, equipment, sub-system or system, the Contractor must test such component, equipment, sub-system or system to the satisfaction of the Inspection Authority, to prove that the specified performance has been achieved and that the component, equipment, sub-system or system performs as required by the specifications.
- (c) Tests, trials and demonstrations must be conducted in accordance with a logical, systematic schedule which must ensure that all associated components and equipment are proven before sub-systems demonstration or testing, and that sub-systems are proven before system demonstration or testing.
- (d) Where the Specifications do not contain specific performance requirements for any component, equipment, sub-system or system, the Contractor must demonstrate such component, equipment, sub-system or system to the satisfaction of the Inspection Authority.
- (e) The Contractor must co-ordinate each test, trial and demonstration with all interested parties, including the Inspection, Contracting and Technical Authorities; regulatory authorities; Classification Society; Sub-contractors; etc. The Contractor must provide the Inspection Authority and other Government of Canada Authorities with a minimum of ten (10) working days notice of each scheduled test, trial, or demonstration.
- (f) The Contractor must keep written records of all tests, trials, and demonstrations conducted required by the QA System.
- (g) The Contractor must in all respects be responsible for the conduct of all tests and trials in accordance with the requirements of the Contract.
- (h) The Contracting Authority and the Inspection/Technical Authority reserve the right to defer starting or continuing with any sea trials for any reasonable cause including but not limited to adverse weather, visibility, equipment failure or degradation, lack of qualified personnel and inadequate compliance with safety standards.

ANNEX D - DETAILED FINANCIAL BID PRESENTATION SHEET

D-1 Proposed Work Location:

Contractor's Facility _____

D-2 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, customs duties are included and applicable taxes are extra, CIP (Incoterms 2000) to destination: **Kitimat, British Columbia.**

a.	Known Work (Quantities: 1 boats, 1 trailers) For work as stated in Part 1 article 1.2, specified in Annex A, entire TSOR One (1), 5.8 to 5.99 m Aluminium Jet Boat with centre stand up console and trailer for a FIRM PRICE of:	\$ _____
b.	Unscheduled Work <i>Labour Cost:</i> Estimated labour hours at a firm <i>Charge-out Labor Rate</i> , including overhead and profit: 50 person hours X \$ _____ per hour for a PRICE of: See articles D-3 and D3.1 below.	\$ _____
c.	Delivery to destination , CIP, (Incoterms 2000) to: Kitimat , British Columbia for a FIRM PRICE of:	\$ _____
d.	EVALUATION PRICE [a + b + c For an EVALUATION PRICE of: customs duties are included and applicable taxes are excluded	\$ _____

D-3 Unscheduled Work

Unscheduled work arising, as authorized by the Minister, will be calculated in the following manner:

"Number of hours (to be negotiated) X \$ _____ your firm hourly *Charge-out Labour Rate* which includes *Overhead* and profit, plus net laid-down cost of materials to which will be added a 10% mark-up, plus Goods and Services Tax or Harmonized Sales Tax as applicable, of the total cost of material and labour.

The firm hourly *Charge-out Labour Rate* and the material mark-up will remain firm for the duration of the Contract and any subsequent amendments."

D-3.1 Notwithstanding definitions or usage elsewhere in this document, or in the Bidder's Cost Management System, when negotiating *Hours* for unscheduled work, PWGSC will consider only those hours of labour directly involved in the production of the subject work package.

Elements of *Related Labour Costs* identified in D-3.2 will not be negotiated, but must be included within the *Charge-out Labour Rate*. It is therefore incumbent upon the Bidder to enter values in the above table which will result in fair compensation, regardless of the structure of their Cost Management System.

D-3.2 Allowance for *Related Labour Costs* such as: Management, Direct Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, First Aid, Gas Free Inspecting and Reporting, and Estimating must be included as *Overhead* for the purposes of determining the *Charge-out Labour Rate* entered in line D-2b and Article D-3 above.

D-3.3 A 10% mark-up rate will be allowed for materials and this rate will also apply to subcontracted costs. The mark-up rate includes any allowance for material and subcontract management not allowed for in

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the Chargeout Labour Rate. A separate labour component for the purchase and handling of materials or subcontract administration is not allowable.

D-4 Boat Delivery Proposal

While the delivery of the boats and all deliverable to destination required by the Contract is desired for **November 20, 2015**.

The best delivery that could be offered is _____ weeks after Receipt of Order (ARO).

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ANNEX E - SUBCONTRACTOR LIST

Specification Item	Description of Goods/Services (Including Make, Model Number as	Name of Supplier	Address of Supplier

ANNEX F - INFORMATION REQUIRED FOR THE VERIFICATION OF INTEGRITY PROVISIONS

Please provide a list of names of the following entities, according to the ownership nature of the company

1. For a Corporation - each current member of the Bidder's Board of Directors;

2. For a Partnership, General Partnership or Limited Partnership - the names of all current partners;

3. For a Sole Proprietorship or an individual doing business under a firm name - the name of the sole proprietor or individual;

4. For a Joint Venture - the names of all current members of the Joint venture;

5. For an individual - the full name of the person

ANNEX G – BIDDERS’ BID PACKAGE CHECK LIST

REQUIREMENT: REQUEST FOR PROPOSALS (RFP): Fabrication and Delivery of 5.8 M to 5.99M Aluminium jet boat with centre stand up console and trailer for the Department of Fisheries and Oceans.

Instruction to Bidders: Table G-1 is a check list for self-verification purposes.

Table G-1 Bidder’s Bid Package Check List

G1.1

Notwithstanding deliverable requirements specified anywhere else within this bid solicitation and its associated Technical Specifications, the following are the only mandatory deliverables that must be submitted with the Bid documents at the time of bid closing. The following are mandatory and the Bidder must be compliant on each item to be considered responsive.

No	Part	Article	Description	Condition	Document provided
<u>Section I- Technical Bid</u>					
1		Front page	<u>Request for Proposal</u> document part 1 page 1 completed and signed;	Mandatory with the bid	<input type="checkbox"/>
2	3	3.2.1	Annex G-Bidder package Check list	Mandatory with the bid	<input type="checkbox"/>
3	3	3.2.3	Drawing and other documentations	Mandatory with the bid	<input type="checkbox"/>
4	3	3.2.5	Vessel construction experience	Mandatory with the bid	<input type="checkbox"/>
5	Annex H	All	Technical Bid- Annex H Bidder’s RFP reply and evaluation plan.	Mandatory with the bid	<input type="checkbox"/>
<u>Section II- Financial Bid</u>					
5	Annex D	All	Annex D- Detailed Financial Bid Presentation Sheet	Mandatory with the bid	<input type="checkbox"/>

G1.2 Supporting Deliverable Requirements

If the following information which supports the bid is not submitted with the Bid; it will be requested by the Contracting Authority, and it must be provided within 48 hours (3 business days) of the written request:

No	Part	Article	Description	Condition	Document provided
<u>Section I- Technical Bid</u>					
1	3	3.2.2	Inspection and Test Plan	48 hrs of written request	<input type="checkbox"/>
2	3	3.2.4	Subcontractor list	48 hrs of written request	<input type="checkbox"/>
3	3	3.2.6	Marine Drafting and Engineering capability	48 hrs of written request	<input type="checkbox"/>
4	3	3.2.7	Contractor Quality Management	48 hrs of written request	<input type="checkbox"/>

			system		
5	3	3.2.8	Insurance requirement	48 hrs of written request	<input type="checkbox"/>
6	6	6.5.4	Contractor representative	48 hrs of written request	
Section III- Certification					
7	6	6.9	Welding certification	48 hrs of written request	<input type="checkbox"/>
8	5	5.2.1	Annex F Information required for the Verification of Integrity Provisions	48 hrs of written request	<input type="checkbox"/>
9	6	6.20	Applicable laws	48 hrs of written request	<input type="checkbox"/>

G1.3 Contract Deliverable Requirements

The following information may be requested by the Contracting Authority, and it must be provided within the conditions stated in the table below of the written request:

No	Part	Article	Description	Condition	Document provided
<u>Other documentation after contract award (Reminder)</u>					
1	6	6.10	Project Schedule	5 days after contract award	
2	6	6.17	Inspection and Test Plan	7 days after contract award	
3	6	6.19	Insurance certificate	10 days after contract award	

ANNEX H –BIDDER’S RFP REPLY AND EVALUATION PLAN

H-1.0 Bidder’s RFP Reply

The bidder is to reply to the RFP by using the **Table H-1 of this ANNEX- Column B - ONLY**

This is a model for the bidder to use. Table’s contents are fictional and represent a sample only.

STATEMENT OF WORK	BIDDER “ NAME” RESPONSE
2.0 General	2.0 General
2.1 The seventeen foot vessel must be a cock pit design with stowage below the closed bow deck commonly referred as a “Cuddy” style	The proposed seventeen foot vessel features an open cockpit design with stowage below the closed bow deck, commonly referred in the industry as to a “Cuddy” style vessel.
2.2 Not applicable	2.2 Not applicable
2.3 Not applicable	2.3 Not applicable
2.4 All components, equipment and material must be contractor supplied unless addressed as Government Supplied Material (GSM)	Unless stated otherwise, a;; components, equipment and material will be supplied by the “Bidder names”
4.0 Vessel particulars Seventeen foot	4.0 Vessel particulars Seventeen foot
4.1.1 Physical length a) Length- 6.0 to 6.2 M b) Breadth overall Min 2.4 M c) Dead rise Min 16 degrees d) Draft (Outboard down) max 0.9. M e) Draft (Outboard Up) Max 0.5 M f) Freeboard between 0.9. to 1.00 M	4.1.1 Physical length a) Length- 6.19 M b) Breadth overall Min 2.42 M c) Dead rise Min 18 degrees d) Draft (Outboard down) max 0.80. M e) Draft (Outboard Up) Max 0.42 M f) Freeboard between 0.95

H-1.1 Mandatory Requirements evaluation

The bidder must use the Statement of requirement Annex “A” numbering sequence for the tables below.

The Bidder shall provide, as part of its Technical Proposal, all documents essential to demonstrate compliance with each technical mandatory requirement, including, without limitation, photographs, maps, drawings, calculations, Original Equipment Manufacturer (OEM) specifications, documents, purchase orders (less cost data), job or Quality Control or Quality Assurance record sheets, personnel resumes, current trade certificates and, other such evidence.

The Bidder itself must meet the requirements of each evaluation item listed below, except as otherwise expressly provided in the evaluation item. If an evaluation item expressly provides that it or any element of it may be met by a subcontractor to the Bidder, then the Bidder shall provide documented evidence of such compliance by its subcontractor. In that event, the Bidder shall also provide evidence that it has a binding commitment with that subcontractor under which the subcontractor will perform services under subcontract with the Bidder under any contract issued pursuant to this RFP, and that such services are of the same type as are specified in the relevant evaluation item.

Lines annotated with the following symbol “◀” “requires drawing to demonstrate compliance with the requirement

(Table H-1- Column C- filled by the technical evaluators)

Table H-1 Mandatory Requirement

Column A Description	Column B Bidder Proposal	Column C Mandatory Requirement	
		Bid Ref Page	Pass - Fail
1.0 SCOPE			
1.1.1 This vessel is intended to be built based on stock small working or commercial vessel hull forms with a minimum of customization as indicated herein. Prototype hulls will not be considered for this procurement. A minimum of two proven hulls must be shown to have been produced and be in service within the last 5 years for the Contractor to indicate suitability of the hull for this procurement. Bidders must submit at a minimum the following items for each proven hull: General arrangement drawings; Photographs; References; Builder's plates; Hull identification numbers confirming the multiple builds.			
1.1.2 The Contractor must design, fabricate and supply quantity, one (1) Aluminum, Jet Boat with trailer based on the current Transport Canada Marine Safety Branch (TCMSB) Marine Safety Publication TP 1332 "Construction Standards for Small Vessels" (hereinafter referred to as TCMSB TP 1332). The boats must be 200hp Inboard Jet gasoline motor configuration.			
1.1.3 The primary role of this boat will be used for various hatchery operation activities including in-river monitoring, juvenile assessment programs and adult salmon brood capture. This requires operations in various river conditions including shallow braided channels and fast flowing rapids. Lake colonization and nutrient monitoring is a key task for the vessel in support of recent strategy changes in juvenile salmon rearing programs. Near shore marine use will relate to beach seining activities as well as a marine plankton sampling program The boat is required to be capable of operating in shallow draft conditions (i.e. minimum depth of 0.2 meter) as well as variable open water conditions (waves &			

<p>swells up 1.85 meter) while providing a reasonable standard of passenger comfort. The vessel will be trailered locally on paved roads with occasional travel on gravel logging roads. The boat will be trailered extensively over long distances on gravel roads and launched from all types of remote location launch ramps.</p>			
<p>1.1.4 The secondary roles will be search and rescue and other fisheries enforcement duties such as boarding and surveillance duties within the reasonable capabilities for this type and size of vessel.</p>			
<p>1.1.5 This vessel will be shore-based and launched and recovered by trailer.</p>			
<p>1.2 OPTIONAL BOAT</p>			
<p>1.2.1 The Contractor must grant an option for one (1) additional Jet Boat with trailer and documentation in accordance with this Technical Statement of Requirements (TSOR), as per the Contract.</p>			
<p>1.3 TECHNICAL & DOCUMENTATION REQUIREMENTS The Contractor is responsible for all aspects of design and production of the vessel and must prepare their own Project Data Package to define the vessel and control the production process.</p>			
<p>1.3.1 Bid Deliverable Data Package Requirements for Bid Deliverables are given in the Solicitation Document and applicable Annexes.</p>			
<p>1.3.2 Preliminary Data Package The Preliminary Data Package must demonstrate that the vessel will be fully seaworthy, operable and fit in all regards for the purposes intended. The Contractor must submit their Preliminary Data Package for review by the Technical Authority and in accordance with the Contract. In addition to any requirements given in the Contract and applicable Annexes, the Preliminary Data Package must include, but will not necessarily be limited to, the following technical drawings and information: 1.3.2.1 A general arrangement. 1.3.2.2 Structural Drawings showing</p>			

<p>Deck Plan, a Centerline profile. 1.3.2.3 A detailed Lines Plan. 1.3.2.4 A drawing of the fuel supply arrangement. 1.3.2.5 A drawing of bilge pumping system 1.3.2.6 Electrical one-line diagram. 1.3.2.7 The lightship weight. 1.3.2.8 Draft Stability Calculation of the proposed vessel. 1.3.2.9 A Project Plan (written description) of how the Bidder/Contractor will comply with the TSOR. The written description must address each main element of the TSOR and indicate how the Bidder/Contractor will comply with the intent of the TSOR and successfully deliver the vessel(s) to the performance standard(s) identified. 1.3.2.10 A Preliminary Production Schedule which must verify the Bidder/Contractor's ability to deliver the vessel(s) in accordance with the requirements of the Solicitation.</p>			
<p>1.3.3 Construction Data Package The Contractor must revise and update their Preliminary Data Package to incorporate comments from the Technical Authority and must complete and submit their Construction Data Package to the Technical Authority. The Contractor must update their Construction Data Package to reflect changes in the requirement and/or changes in materials or equipment as necessary or when requested.</p> <p>In addition to any requirements given in the Contract and applicable Annexes, the Construction Data Package must include, but will not necessarily be limited to, the following technical drawings and information:</p> <p>1.3.3.1 All technical drawings and information identified within the "Preliminary Data Package", updated as necessary (excepting that the "Project Plan" need not be revised); 1.3.3.2 The "Preliminary Production Schedule" must be expanded to a "Production Schedule" which must be regularly updated to demonstrate progress of the work and anticipated completion date;</p>			

<p>1.3.3.3 Lightship weight and center of gravity calculations must be monitored and the Technical Authority must be advised of changes as they are identified;</p> <p>1.3.3.4 Stability calculations must be revised when necessary or when requested;</p> <p>1.3.3.5 Speed and endurance calculations;</p> <p>1.3.3.6 Additional technical drawings, schedules and information as necessary to fully define the vessel;</p> <p>1.3.3.7 Contractor shop drawings;</p> <p>1.3.3.8 Technical information pertaining to materials and equipment;</p> <p>1.3.3.9 Material certificates; and,</p> <p>1.3.3.10 Other applicable technical inform</p>			
<p>1.3.4 Final Data Package The Contractor must provide to Canada all documentation required by the Contract, this TSOR and other annexes or attachments to the Contract. The minimum acceptable final data package is as attached hereto at Appendix I.</p>			
<p>1.4 Project Management Requirements The Project & Management Requirements, including deliverable requirements, are defined in the Contract and/or applicable Annexes. The Bid deliverable requirements are defined in the Solicitation Document and Evaluation Plan.</p>			
<p>1.5 Bid Evaluation Criteria</p>			
<p>Mandatory and/or point rated technical criteria applicable to the evaluation of bids are defined in the Solicitation Document and/or evaluation plan.</p>			
<p>2.0 DESIGN AND CONSTRUCTION REQUIREMENTS Unless stated otherwise all components, equipment and material must be contractor supplied.</p>			
<p>2.1 Ergonomic Design 2.1.1 Hazardous operating conditions must be prevented by arranging machinery and equipment in a safe manner; providing guards for all electrical, mechanical and thermal hazards to personnel; and providing guards or covers for any controls that</p>			

<p>might accidentally be activated by contact of personnel.</p>			
<p>2.1.2 The boat must be designed and constructed to accommodate both male and female crew from approx. 5' 5" to 6' 4" in height, wearing cold weather clothing and equipment in accordance with ASTM F1166-07 Standard Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities.</p>			
<p>2.1.3 Human engineering factors considered in design must include accessibility, visibility, readability, crew efficiency and comfort. All equipment must be accessible for use, inspection, cleaning and maintenance as per ASTM F1166-07.</p>			
<p>2.2 VIBRATION 2.2.1 The boat and all components must be free of local vibration that could endanger boat personnel, damage boat structure, machinery or systems, or interfere with the operation or maintenance of boat machinery or systems.</p> <hr/> <p>2.2.2 Mounts for movable components, including items moved for stowage, towing or transport must be provided with resilient material as necessary to prevent rattling.</p> <p>2.2.3 Loosening of fasteners under vibration must be prevented by the use of self-locking fasteners.</p>			
<p>2.3 EQUIPMENT PROTECTION The Contractor is responsible for the care of all equipment. All parts, especially those having working surfaces or passages intended for lubricating oil, must be kept clean and protected during manufacture, storage, assembly and after installation. Equipment must at all times be protected against dust, moisture or foreign matter and must not be subject to rapid temperature changes or extremes in temperature.</p>			
<p>2.4 SITE CLEANLINESS During construction, all chips, shavings,</p>			

<p>refuse, dirt and water must be removed at the completion of the work shift or sooner. The Contractor must ensure measures are taken to avoid wear and damage incident to construction, and to prevent corrosion or other deterioration. Equipment subject to freezing must be kept drained, except during test and trials. Equipment must be kept clean and protected from the environment prior to installation.</p>			
<p>2.5 STRUCTURAL STRENGTH All structures and components (hull, deck, seating, etc.) must be of sufficient strength to withstand when in the Normal Load Condition, the lateral and vertical impact-loading that equates to the conditions of the operational requirements.</p>			
<p>2.6 LAUNCHING The boat must be capable of being launched, recovered and transported by road trailers and / or from other vessels as indicated in this TSOR</p>			
<p>2.7 HULL The hull must be constructed of Aluminum.</p>			
<p>2.8 DECK The deck and hull must be constructed of aluminum and have a suitable non-skid surface. Decks must be self-draining, by means of non-return freeing ports or similar. The deck above the watertight compartments must be bolted for easy removal to allow access for repair of buoyancy compartments beneath.</p>			
<p>2.9 TIE DOWNS Flush mounted deck tie downs will be fitted on the forward deck area for the securing of deck cargo. (Minimum of 4 required).</p>			
<p>2.10 STOWAGE The Contractor must provide a watertight compartment for safe stowage of equipment and accessories. Arrangements must be provided for safe, secure and accessible stowage of an anchor and cable, paddles, and other equipment.</p>			

<p>2.11 TOWING/TRAILERING A bow eye or U-bolt arrangement must be incorporated into the construction of the stem, suitable for towing the boat at a speed of 5 knots in calm water in the normal loaded condition, on an even keel without damaging the boat or causing undue chafing of the towline. This bow eye must also be suitable for trailering purposes.</p>			
<p>2.12 STANDARDS</p>			
<p>2.12.1 Boats constructed under this TSOR must be fabricated in accordance with the current TCMSB TP 1332 "Construction Standards for Small Vessels" and where applicable the American Boat & Yacht Council (ABYC)</p>			
<p>2.12.2 CSA C22.2 No. 183.2-M1983 (R1999) Standards for DC Electrical Installations on Boats and ABYC 'E' Electrical Standards.</p>			
<p>2.12.3 CWB CSA/ACNOR W47.2; Division 2.1 certification for Aluminum Welding– latest revision."</p>			
<p>2.12.4 The Contractor must construct each boat as per this TSOR and where this TSOR interferes or contravenes the above standard; the above TCMSB TP 1332 standard will take precedence</p>			
<p>2.13 Materials</p>			
<p>2.13.1 All materials must be corrosion resistant and suitable for use in a salt water environment as detailed in the Operational Requirements. All materials normally subjected to sunlight must resist degradation caused by ultraviolet radiation. Galvanized materials are unacceptable.</p>			
<p>2.13.2 Dissimilar Metals: Direct contact of electrolytically dissimilar metals is not allowed. Electrolytic corrosion must be prevented by insulating dissimilar materials from each other with gaskets, washers, sleeves, or bushings of suitable insulating material.</p>			
<p>2.13.3 Aluminium: Aluminium alloy types 5086-H32 must be used for plate; aluminium alloy 6061-T6 (anodized</p>			

grade), suitable for type 5356 filler alloy, must be used for extruded shapes and 6063 for welded tubing and pipe. Non-structural items of trim and outfit such as hatch frames, castings, consoles, and hardware items may be of other aluminium alloys suitable for commercial saltwater marine use such as dual rated 5083 / 86 or 5052 or 6063-T54.			
2.13.4 Stainless Steel: Stainless steel type 316L or 316 must be used for all stainless steel applications except as noted. Alloy 316L must be used in any welded underwater components. Fittings and clamps must be stainless steel. Bolts used in all fittings must be Type 316 stainless steel.			
2.13.5 Fittings and clamps must be stainless steel. Bolts used in all fittings must be Type 316 stainless steel.			
2.13.6 Where flexible connections are required for steering and fuel systems, suitable hose with permanently crimped, detachable reusable type fittings must be used.			
2.13.7 All materials and equipment must be stored installed and tested in accordance with the manufacturer's guidelines, recommendations and requirements.			
2.14 Fasteners			
2.14.1 All fasteners must be of corrosion resistant materials.			
2.14.2 Cadmium plated parts and fasteners, including washers, must not be used.			
2.14.3 Direct attachment of alloys containing copper to aluminium is not permitted except for an electrical bonding strap.			
2.14.4 No fasteners must be directly threaded into Aluminium. Aluminium or Stainless steel washers or backing plates must be used as appropriate.			
2.14.5 Where nuts will become inaccessible after assembly of the vessel, nuts must be captured or anchored to allow reassembly and			

prevent backing off. Unless otherwise specified, self-locking nuts must be installed to prevent loosening of fasteners due to shock and vibration.			
2.14.6 Fasteners in deck traffic areas must be flush-mounted to eliminate tripping and snagging hazards.			
2.15 FACILITIES			
The Contractor must have a shop capable of maintaining temperature and humidity appropriate for painting and as applicable. It must be capable, when necessary, of maintaining temperature between 16°C and 25°C and maintaining relative humidity below 70%.			
1.0 OPERATIONAL REQUIRMENTS			
3.1 GENERAL Unless otherwise stated, performance must be for conditions of zero sea state and no wind, in salt water in normal load condition. The boats must be designed and constructed for ease of maintenance and repair, long life, and are to be easily supportable in the location of the delivery address of the boat, by local commercial facilities and suppliers. The boat must be expected to have a service life of at least 7 years, with an expected usage of between 400 and 500 hours per year.			
3.2 Cruising Speed Contractor must indicate the expected cruising speed in normal load condition. The cruising speed must be between 20 and 25 knots.			
3.3 Maximum Speed Contractor must indicate expected maximum speed in normal load condition. The maximum speed at trial must be not less than 30 knots.			
3.4 Range Contractor must indicate expected range at cruising speed in nautical miles, with 10% reserve fuel.			
3.5 Maneuverability Capable of steering 15° from heading in Beaufort Force 4 with seas from any direction. Steer and manoeuvre effectively at 5 knots in Beaufort Force 4. Maintain course, made good over ground, when proceeding at 3 knots with relative crosswind of 15 knots.			

<p>3.6 Beaching</p> <p>3.6.1 Capable of beaching on soft (sand, earth or clay) surfaces at a speed of up to 5 knots without damage to the hull.</p>			
<p>3.6.2 Capable of beaching on hard (stone or concrete) surfaces at speeds of up to 3 knots without damage to the hull.</p>			
<p>3.7 Environmental Conditions Capable of operating day or night in the following conditions:</p>			
<p>3.7.1 Average ambient air temperature range: -5C to +30 C.</p>			
<p>3.7.2 Average water temperature: 0 C to +20 C</p>			
<p>3.7.3 Wave heights of 1 meter to 1.5 meters (WMO Sea State 4)</p>			
<p>3.7.4 Wind speeds of 11-16 knots minimum.</p>			
<p>3.7.5 Required to operate safely in ice infested waters, (some minor damage to the boat, not affecting stability or buoyancy is acceptable). Boat operates in freezing spray or freezing rain with accumulations of up to 6.0 mm while maintaining stability while allowing for safe transit in Beaufort force 6.</p>			
<p>2.0 Physical Characteristics Aluminum "V" style monohull having a raked stem and transom stern with a reverse chine flat. Vessel style – Open working deck, center stand up console. The console must be located to allow for 1 meter of aft deck space from the forward edge of the engine box to the aft edge of the console. A forward bow rider step deck, 0.2m step up from the main deck extending across the breadth of the vessel and a length of 1m from the stem.</p> <p>4.1 Vessel Particulars</p>			
<p>4.1.1 Length overall – of hull is to be 18.0 to 18.5 feet not including the swim grid,</p>			
<p>4.1.2 In the event that the overall length, measured including the swim grid, exceeds 5.99 m then the swim grid must be a bolt-on attachment such that official length will not exceed 5.99m.</p>			

4.1.3 Extreme breadth must not exceed 7.5 feet.			
4.1.4 Breadth measured at sheer must be 7.0 to 7.5 feet.			
4.1.5 Maximum breadth measured at chine is it be 6.0 feet.			
4.1.6 Minimum hull side panel height measured from chine to sheer is to be 30 inches.			
4.1.7 A foc'sle deck at the bow, approximately 30" to be positioned ½ way between the working deck and top of bulwark. Primary consideration must be given to the working deck, minimum 4.5 feet from forward side of console to the start of the foc'sle deck. The space below the Foc'sle will be used for storage, therefore a weathertight acces hatch will be required and the working deck must continue as far forward as possible below the foc'sle.			
4.1.8 Propulsion – One 200 HP Mercury Optimax Jet supplied by the Government (GSM).			
4.1.9 Normal load condition: 4.1.9.1 Crew of 2 with Kit = 300kg 4.1.9.2 Fuel = Minimum 140 liters in one tank, (Total 112kg) 4.1.9.3 Equipment & supplies = 600kg			
3.0 VESSEL CONFIGURATION			
3.1 HULL			
3.1.1 Hull form shall be a 8 degree deadrise V-bottom (+/- 1 deg), constant angle measured from transom to at least 50% of length from stern forward and faired as necessary into the stem.			
3.1.2 Main chines of no less than 4" width shall run the full length, fitted with an 6 to 8 degree reverse angle flat tapered into the stem.			
3.1.3 Bottom hull spray strakes to be incorporated into the hull design to increase maneuverability at lower operational speeds.			
3.1.4 Hull to be fitted with a Delta Pad keel, suitable to incorporate the jet drive.			
3.1.5 A full width swim grid is required, its minimum length to cover the jet			

equipment and incorporate jet drive unit protection. The engine guard over jet drive must be removable.			
3.1.6 Fixed trim tabs shall be incorporated into the aft bottom structure protruded aft of the transom port and starboard.			
3.1.7 Hull bottom from keel to chine is to be fitted for its full length with a protective slip surface, UHMW plastic 3/8" thick, or equal. The UHMW is to be attached with countersunk Grade 8 screws set into pre-tapped or threaded holes and sealed with Sikaflex.			
3.1.8 Hull shape must not impede water flow to the propulsion unit and must direct spray and waves away from on board personnel.			
3.2 HULL STRUCTURE			
3.2.1 The hull, and deck, must be constructed of Aluminium Materials. A copy of the Mil Certificates shall be provided to the Technical/Inspection Authority for all aluminium used in the fabrication.			
3.2.2 Vessel to have a fully welded hull shell and swim grid. Framing welds must be continuous in areas subject to vibration in the vicinity of machinery bedplates and bow areas subject to impact.			
3.2.3 Limitation of weight is important, particularly to facilitate handling in beaching situations. Every effort must be made to control the weight of the vessel without compromising general strength. The framing schedule may be lighter, and/or topside hull plating may employ embossed strakes to increase stiffening.			
3.2.4 Hull bottom and chine plating to be minimum 3/16" plate			
3.2.5 Delta Pad keel plate is to be minimum 3/8" plate			
3.2.6 Side plating is to be minimum 0.125" plate (embossed and framed)			
3.2.7 Deck plating and net deck is to be minimum 3/16" checker plating			
3.2.8 Gunwale deck stringer is to be minimum 3/16" plating (not checker plate)			
3.2.9 The hull and decks are to be transversely framed and fitted with longitudinal stringers,			

<p>3.2.10 Bottom stringers: A minimum of 6 full-length (bottom) stringers is required, or minimum 4 box (top hat) girders with approximately 6" base on hull per girder, not including bar keel forward integrated with delta pad stiffener. Stringers to be ¼" type 6061 extrusions, or if box type .102" plate, or other arrangement providing equivalent support.</p>			
<p>3.2.11 Support of bow area is to be provided through web frames and/or extension of at least one bottom stringer across the bow plating to the sheer stringer plate.</p>			
<p>3.2.12 Bottom and side transverse framing shall be provided which sufficiently supports the structure generally and locally.</p>			
<p>3.3 DECK LAYOUT</p>			
<p>3.3.1 Fully open vessel, primary aft working net deck with centerline helm console as far forward as possible and Bow rider step deck forward of the console.</p>			
<p>3.3.2 The aft working deck shall have a net deck (shall support a 250kg net) flush with the top of the bulwark and extending across the full breadth of the boat. The length will start at the transom to within 18-20" of the aft side of the console. The area between the main deck and the net deck shall be accessible from the forward side for storage. The only protuberance through the net deck will be the Tow Post.</p>			
<p>3.3.3 There will be 3 handholds on fwd side of net deck, spaced at equally across the breadth for passengers to grab.</p>			
<p>3.3.4 There will not be helm and pilot seats.</p>			
<p>3.3.5 Centre mounted console with all controls, adjusted for the height of a standing driver 5'-10" tall.</p>			
<p>3.3.5.1 The windshield must be fixed to console and wrap to half way on each side of console. The height of windshield must be adjusted for the height of the standing driver. The windshield must be fitted with proven manufacturers' aluminium framed windows of Laminated-Tempered Safety glass, Forward window are to</p>			

be minimum 3/8" safety glass. Smaller side windows can be minimum 1/4" thick safety glass.			
3.3.5.2 Grab rails on the front and both of the outer sides of console for passengers for egress around the perimeter of the console. Vertical grab rails on left and right side of wheel and throttle controls for the operator during maneuvers.			
3.3.6 The engine compartment shall be fully enclosed below the net deck, such that storage items below the net deck will not come into contact with the engine.			
5.3.6.1 The engine compartment shall have a powered blower with a dedicated fire port and fire extinguisher, mounted for easy access by the operator.			
5.3.6.2 Access to the engine compartment will be by piano hinged checker plate hatch, flush when closed on the net deck with 2 recessed grabs one in each of the lifting corners. This access hatch will be long enough for easy access to engine and jet intake unit (3' to 4') and when closed will be smooth with the top of the net deck as to not impede fishing net deployment or retrieval. The piano hinge will be on the bow side of the opening.			
5.3.6.3 The underside of the hatch and the vertical bulkheads of the compartment must have sound proofing sufficient to allow operators to communicate effectively while vessel underway, sound levels at cruise not to exceed 89 DBA.			
5.3.6.4 The full edge of the hatch will fit into a channel which will drain water to outside of boat. Foam rubber will be fitted to the full edge of the hatch or to the channel to help stop vibration and to limit entry of water into the channel.			
5.3.6.5 The engine compartment hatch shall have two gas filled shocks, suitable for a marine environment to hold the hatch open when required for access to stop the hatch from falling backwards onto deck.			
5.3.6.6 The hatch shall be strong enough to support 2 people walking on it. All work to be free of burrs or snag points such that a net will not get caught on the net deck side.			
5.3.6 A bow locker is required for			

anchor, cable and miscellaneous stowage configured as a step over the bow. Surface finish of the entire weather exposed decking forward of the aft side of the console must be non-skid/non-slip, SURE-FOOT GRAY, OR EQUAL.			
5.3.8 Cockpit/weather deck drainage scuppers must be of a size to allow sufficient drainage of exposed deck surfaces per TP 1332 and ISO.			
5.3.9 Top of bulwarks around the perimeter of the vessel must be flat across their whole width and a minimum of 175mm wide.			
3.4 BELOW DECK			
5.4.1 Watertight and Tank Bulkheads: The hull design must be such that a sufficient number of compartments, or amount of flotation, including hull compartments, and / or low smoke and flame spread flotation foam, or fire retardant flotation, or flotation devices, will allow for adequate stability and positive buoyancy in a flooded condition. See references to vessel certification, re: TP 1332 / ISO testing.			
6.0 OUTFIT GENERAL			
6.1 HULL OUTFIT			
6.1.1 A tow eye is to be incorporated into the stem such that it is flush with the stem. This is to allow the boat to bow up to rocks without getting hung up. It must be strong enough to tow the boat in calm water in a normal load condition, on an even keel, without damaging the boat. The tow eye must also be suitable for trailer tie down, and located minimum 12 inches above waterline.			
6.1.2 There will be at least 5 flush cleats along the side deck / transom (1 forward, 2 mid ship, 2 aft); with an anchoring bit /cleat fitted on the bow of the vessel. The 2 aft to be located on the transom stern and not on the gunwale. The 2 mid ship must be located between the end of the net deck and the side of the console			
6.1.3 Deck space aft of cockpit to be fitted with a removable tow post to be installed into the center of the net deck athwartships and 1.5' aft of the forward end of net deck where driver would sit to rest. The Tow Post must be a cruciform style and extend 32" above the top of the net deck. The bottom retaining			

<p>socket shall be integrated into the boats bottom structure. The post and base are to be rated for 3000 lb (1360 kg) Safe Working Load (SWL) and be permanently stamped into the tow post and be clearly visible to the operator. The builder shall supply a tow post storage location below the net deck to positively retain the tow post during transport.</p>			
<p>6.1.4 Aft end/netting protection</p>			
<p>6.1.4.1 Tubing guard running vertical on each side of "EZ Clean" grate stomper from edge of swim grid to near top of transom (to stop net from catching stamper.)</p>			
<p>6.1.4.2 Tubing guard running vertical on each side of jet unit running from underside of swim grid to transom on the inner side of trim tab (to prevent net from catching on jet unit).</p>			
<p>6.1.4.3 Air vents if mounted near stern to be mounted on transom so the net does not catch on vents.</p>			
<p>6.1.4.4 Gas fill-up fitting to be installed at least 7 ft forward of the transom (to avoid catching the net) This guard must be fabricated so as to be easily removed to facilitate the removal of the jet leg.</p>			
<p>6.1.5 Vessel shall be equipped with securing eyes fitted to the outside of the transom used for trailer tie downs and used to secure boat for tie up.</p>			
<p>6.1.6 Low profile pipe railings to be installed at sheer from windshield forward to break at bow. Railings must be socket style removable and flush with top of bulwark when removed.</p>			
<p>6.1 DECK OUTFIT</p>			
<p>6.2.1 Vessel shall be outfitted with navigation lighting, and antennas, mounted on console. All around light to be removable and when removed, fixture flush with deck.</p>			
<p>6.2.2 Console dash layout is to be arranged in an ergonomic manner, to provide easy access to controls, electrical panels and easy viewing of navigation and propulsion instruments. The console is to be robustly constructed to eliminate flex from operators holding points, and equipped with a steering system specified for the motor (Mercury steering system).</p>			
<p>6.2.2.1 A single windshield wiper must be installed with on/off/variable switch</p>			

mounted on the console.			
6.2.2.2			
6.2.2.3 A lockable storage compartment must be included within the console for easy access by the operator			
6.2.2.4 In addition a weathertight access panel shall be installed in the forward face of the console for easy access to console outfitting.			
6.2.2.5 A 'cigarette lighter' power point is to be installed on the port dash, with a lockable storage 'glove box'.			
6.2.2.6 The operator's helm is to be located to centre and equipped with all appropriate gauges as recommended by the propulsion system manufacturer, as listed in 'Outfitting'. A dimmer switch is to service all dash lighting. Compass light to have separate control.			
6.2.2.7A searchlight (Marinco Spotlight, Model # SPL12W with SPLR-3 Control head or equal) must be supplied and mounted on a removable pole. Primary mount location is on forward side of the console, STBD side at a height of 6" above the top of the windshield. Two secondary mount locations must be provided at ¾ length of the vessel from the transom on the outboard port and STBD sides.			
6.2.2 The deck above the watertight compartments must have bolted, watertight access plates / hatches for easy removal to allow for repair of tanks and buoyancy compartments beneath, and separate cover plates for inspection access to the fuel system components as well as quick accesses for utilities and as required by TP1332.			
6.2.4 Two removable weather proof canvas covers shall be provided, one for the console and a second to encompass the entire boat with tow post removed and stored. The covers must provide weather protection and be easily installed or removed. The cover for the entire boat cannot utilize snaps from midships aft due to the potential of snagging the fishing net during deployment and retrieval, therefore, the contractor must identify a method of fastening that will not impede these operations.			
6.3 LIFESAVING & EMERGENCY EQUIPMENT			

The following items must be provided with appropriate stowage / securing arrangements (as appropriate for each item). All fittings, Contractor supplied, must be heavy duty, corrosion resistant 316 stainless steel fittings. All items must be readily accessible (the foot pump and the repair kits must be stowed in a stowage locker). All items must be readily accessible.			
6.3.1 A water-resistant flashlight and a set of spare batteries.			
6.3.2 Two (2) wooden paddles			
6.3.3 One extinguisher (Class 5BC, marine type) with mounting bracket installed on craft			
6.3.4 Anchor (Fortress FX7 model or equivalent) with 50 feet of ¾ line and a galvanized chain			
6.3.5 Sea anchor and Line			
6.3.6 Four (4) 25-foot mooring lines			
6.3.7 Four (4) 6 inch diameter fenders			
6.3.8 Transport Canada approved First aid kit			
6.3.9 Air horn			
6.3.10 Buoyant heaving line of at least 10 meters			
6.3.11 Six (6) TCMSB approved flares, among which at least 3 of which to be type A, B or C.			
7.0 SYSTEMS GENERAL			
7.1 PROPULSION			
7.1.1 The boat is to be powered by a 200 HP Mercury Optimax Jet			
7.1.1.1 The Mercury Optimax Jet unit, only, will be Government Supplied Material [GSM], all ancillary equipment and installation materials including, but not limited to those listed below, must be Contractor Furnished Materials [CFM].			
7.1.2 Jet drive intake skid plate (QT-100) and heavy duty 'EZ Clean' grate must be incorporated include an EZ Clean grate stamper clean out system and Heavy Duty Pump guard.			
7.1.3 Motor must be installed in accordance with manufacturer's recommendations. Installations of the engine(s), controls, lubrication and fuel systems, battery connections, etc. must be verified by an authorized Mercury representative.			
7.1.4 The combined engine control is to be supplied and installed at the time of			

construction according to the Mercury manufacturer's specifications. The installation is to use all motor control cables and electrical harnesses from the Mercury motor manufacturer. The control is to be equipped with a motor kill switch.			
7.1.5 Impeller must be Stainless Steel.			
7.1.6 Contractor to supply and install a Stainless Steel wear ring.			
7.2 CONTROLS			
7.2.1 Manufacturer must install any of the following equipment included in the manufacturers' standard and optional gauge package (e.g. Mercury Smart Craft) for the specified engine.			
7.2.1.1 Tachometer for engine.			
7.2.1.2 Temperature, Fuel, Oil Pressure, Hour and Volt gauges.			
7.2.1.3 Controls, mounted at starboard side of console.			
7.2.1.4 Ignition harness (mounted so that the key cannot collect water). Propulsion control system installation must include a binnacle engine control located on the starboard side of the helm console. The controls must conform to engine manufacturer's recommendations and must not interfere with any of the other controls.			
7.2.2 Engine package must incorporate a lanyard style safety shutdown feature (kill switch) for the engines, to be mounted near the ignition switch.			
7.3 ALARMS			
7.3.1 Monitoring system for the engine must include the following alarms			
7.3.2 Oil level gauge, for the remote tank			
7.3.3 Coolant flow alarm, if applicable			
7.3.4 Engine overheat/high temperature alarm			
7.4 VERIFICATION OF INSTALATION			
Installation of the motor, controls, lubrication and fuel systems, manometers, battery connections, are to be verified by an authorized technician. The motor is to be started by the authorized technician, who must provide a written report with a copy for the Technical Authority.			
7.5 ENGINE BREAK-IN			
The Contractor is to respect the engine manufacturer's break-in procedures.			
7.6 PROTECTION OF CONTROLS			
All control cables, electrical wiring for			

the motor and the steering hydraulic hoses are to be installed in UV resistant plastic pipes (LOOM) or equal. These pipes are to be installed in such a manner as to ensure that no cable is immersed in water.			
7.7 STEERING			
7.7.1 Steering systems must be as recommended by Mercury for this engine with a maximum of 1 wheel turn from hard over to hard over (270 degrees from lock to lock)			
7.7.2 The Steering wheel must be Aluminum and covered with Thermoplastic antishock material, 13.8" diameter with a removable stainless steel knob. (UltraFlex steering wheels meet these requirements)			
7.8 FUEL SYSTEM		7.9	7.10
The complete fuel systems must be supplied, installed, labeled and tested in accordance with Section 7 of TP 1332 and ABYC specifications.			
7.8.1 The fuel system must include a Racor filter/separator suitable for fuel supply.		7.10.1	7.10.2
7.8.2 All fuel valves must be readily accessible and labeled as per TCMSB TP 1332.		7.10.3	7.10.4
7.8.3 Fuel filling must be located to be accessible and designed to catch fuel from over filling or blow back, so that the fuel does not enter the vessel as per TCMSB TP 1332 requirements.		7.10.5	7.10.6
7.8.4 Remote fuel shutoff valves must be installed in accordance with TP1332 and ABYC requirements, remote from the fuel tanks and engine compartments. Labeled as per TCMSB TP 1332 requirements.		7.10.7	7.10.8
7.8.5 Fuel tank vent pipes are to be equipped with a non-return check valve.		7.10.9	7.10.10
7.9 FUEL TANK		7.11	7.12
7.9.1 The vessel must be fitted with one (1) fuel tank with baffles as necessary.		7.12.1	7.12.2
7.9.2 The tank must be aluminum and fitted below the deck.		7.12.3	7.12.4
7.9.3 The total capacity must be a minimum of eighty liters (80) liters.		7.12.5	7.12.6
7.9.4 Fuel Tanks are to be hydrostatically tested, or air tested to 3.0 p.s.i. and be labelled per the requirements of TP1332.		7.12.7	7.12.8
7.9.5 Fuel tank(s) must be fitted with fuel level/capacity sender unit and a gauge on the dash of the console for the		7.9.5	7.9.6

operator.			
7.10 ELECTRICAL SYSTEM		7.11	7.12
The electrical system design, component selection and installation must be in accordance with Canadian Standards Association C22.2 NO. 183.2-M1983 (R1999) "Standards for D.C. Electrical Installations on Boats", and TP1332 and/or ABYC 'E' as referenced by TP1332. All electrical equipment and hardware must be installed in accordance with the manufacturer's specifications. Electrical equipment identified as required to be waterproof (e.g. console switch panel) will be deemed acceptable if it meets with IP66. Incorporating a waterproof breaker panel with a minimum of 10 circuits fitted. The Contractor must ensure that the breaker panel has 10% expansion room or a minimum of 2 spare breakers (whichever option is greater).			
7.10.1 Twelve Volt (12V) DC distribution system must be provided to power the engine starting and boat service loads including:			
7.10.1.1 Navigation lights;			
7.10.1.2 Exterior Lighting;			
7.10.1.3 Navigational equipment;			
7.10.1.2 Instrumentation;			
7.10.1.5 Bilge Pumps;			
7.10.1.6 Electronics; and			
7.10.1.7 Communications			
7.10.2 All fitted electrical equipment must be capable of operating simultaneously with any other fitted electronics equipment without causing interference to any electronic equipment or to the magnetic compass.			
7.10.3 All electrical equipment must be readily accessible for performing maintenance.			
7.10.2 Two (2) marine quality 12V power outlets must be must be installed on or near Operator's console.			
7.10.3 CABLES			
7.10.5.1 Cables must be grouped into wiring harnesses wherever possible. All wiring harnesses must be routed through protective conduit pipe. Where impractical cables and conductors must be supported with clamps or straps at least every 18 inches on horizontal runs			

and every 14 inches on vertical runs.			
7.10.5.2 Cabling / conductors passing through watertight boundaries, decks, bulkheads or other exposed surfaces must be installed to maintain watertight integrity of the structure. Cable entry into watertight enclosures must be through watertight marine glands of suitable size.			
7.10.5.3 Cabling / conductors passing through structures without watertight glands, must be protected against chafing by the use of abrasive resistant grommets.			
7.10.5.4 Routing cables through foamed spaces must be avoided wherever possible. Cables that must be routed through foamed spaces must be run in PVC conduit pipe. The pipe must be arranged in a manner that prevents water from becoming entrapped in the pipe.			
7.10.5 Batteries, Switches:			
7.10.6.1 The boat is to be equipped with a system of two type M30MF deep-cycle batteries with a selector switch and connected in accordance with the motor manufacturer's technical specifications.			
7.10.6.2 Batteries must be marine grade glass mat or gel type maintenance free to eliminate leakage, and a minimum 800 deep-cycle cranking amps.			
7.10.6.3 Battery switches must be recessed to prevent snagging or accidental switching.			
7.10.6.4 Battery compartments must be weathertight and fitted with a suitable means of venting.			
7.10.7 Bilge Blower: The boat must be fitted with a 12V DC bilge blower system in accordance with TP 1332 and ABYC specifications. The bilge blower system must be controlled by a separate watertight switch and fuse located at the operator's console.			
7.10.8 Lighting:			
7.10.8.1 Backscatter of console lights must be minimized in the design. In all cases, progressive marine grade dimmers must be fitted wherever practicable, with the capability of dimming engine monitoring gauges and other indicators separately from compass illumination.			
7.10.8.2 Navigation lighting must conform to CSA Collision Regulations.			

7.10.8 Pumping and Drainage			
7.10.9.1 Electric bilge pump with 1500 gallons per hour (gph) capacity must be fitted in each watertight division as well as a fixed manual operated diaphragm type bilge pump. The bilge pump must be located so that it takes suction from the lowest point of the hull. Piping will allow the bilge pump to discharge directly overboard. An automatic control must be fitted that turns on the electric bilge pump when water is present in the bilge. The electric bilge pump control switch must be located on the operator's console, with settings for 'on', 'off and 'automatic' operation. An indicator light and an audible alarm must be installed at the console that lights when the bilge pump is operating. Bilge pump(s) must be wired direct to battery, so that it is constantly active as per TCMSB TP 1332 requirements.			
7.10.9.2 Hull drainage - a non-corrosive threaded plug must be provided in the lowest point to drain the hull when out of the water.			
7.10.9.3 Valves and handles must be bronze or stainless steel and must be located where they are readily accessible for operation, maintenance or removal.			
7.10.9 Piping Systems			
7.10.9.2 Flexible Connections - Where flexible connections are required for steering and fuel systems, suitable hose with permanently crimped, detachable reusable type fittings must be used.			
7.10.9.3 Fuel System must be hydrostatically tested, or air tested to 3.0 psi. and be labelled per the requirements of TP1332.			
7.10.9.4 Fittings and clamps must be stainless steel. Bolts used in all fittings must be Type 316 stainless steel.			
7.10.9.5 Each watertight Hull compartment is to have its own 12V DC bilge pump, plumbed to discharge overboard from the compartment, as per TP1332.			
7.11 NAVIGATION EQUIPMENT (COLREGS)			
http://www.tc.gc.ca/acts-regulations/GENERAL/C/csa/regulations/010/csa014/csa14.html			

The following must be Contractor supplied and fitted:			
7.11.1 Navigation lighting fixtures must be of such a design as to resist the effects of vibration and moisture and must be provided with adequate protection from damage.			
7.11.2 Particular COLREGS rules to note (vessels under 12 M.); Rules 22, 23, and Annex 1, rules 2, 9, and 10. (NOTE: The lights must be installed parallel to the "Normal Load" waterline that often may not be parallel to the deck.)			
7.11.3 The navigation lights must be mounted so as not to interfere with vision of the operator.			
7.11.4 The navigation lights must be permanently mounted.			
7.11.5 The Contractor must supply and install an electric horn that ensures the requirements of the Collision Regulations, Rule 32 are met, i.e. with a standard small vessel 'horn' audible 0.5 NM. The horn must be installed on the vessel exterior with the 'horn' facing forward. The horn must be operated by a spring-loaded switch located on the operators' console. The "Signaltone", or Ongaro electric horns meet this requirement.			
7.11.6A Magnetic Compass must be mounted near the centreline of the helm station, in easy view of the operator when facing forward. (The Ritchie Helmsman 70 series meets this requirement.)			
7.11 PAINTING AND CORROSION PROTECTION			
7.12.1 The hull above the waterline must be painted dark green and inside of bulwarks must be bare aluminum with a marine clear coat and UV protector, excepting where "checker plate" is specified or otherwise coated or protected below.			
7.12.2 Deck finish and top of bulwarks forward of net deck to be non-skid paint system, SURE-FOOT GRAY or Equal and must cover the entire deck/bulwark except waterways and fittings.			
7.12.3 Top of bulwarks from forward edge of net deck around the perimeter of the transom must be bare aluminum with a marine clear coat and UV protector.			

7.12.4 Console finish/painting: Zolotone granite or equal.			
7.12.5 Prior to delivery the Contractor must ensure that all non-painted exposed aluminium is free of cosmetic blemishes, including all construction marks, scratches, gouges and stains.			
7.12 WARRANTY AND SERVICE PROVISIONS			
Warranty and service provisions are defined in the Contract.			
8.0 TESTS & TRIALS			
The Contractor must conduct their own inspections, tests and trials to verify successful completion of the Work in accordance with this TSOR and the proper operation of the vessel and all associated equipment. The requirements for inspections, tests and trials and associated deliverable documentation are defined in the Contract and Annexes to the Contract including any test, trials or sample reports attached thereto. All discrepancies identified through the inspection, test and trials processes must be corrected prior to delivery.			
8.1.1 The Contractor must, as a minimum, inspect and test the following items for adherence to the contract requirements and proper operation (proper operation means that the equipment can be started, operated, connected together and demonstrated to function in a normal fashion, as applicable). The inspections and tests listed herein are minimums and are not intended to supplant any controls, examinations, inspections or tests normally employed by the Contractor to assure the quality of the vessel:			
8.1.1.1 Weight			
8.1.1.2 Construction Quality			
8.1.1.3 Lifting Gear, if applicable			
8.1.1.4 Propulsion Engines, including starting			
8.1.1.5 Propulsion Controls			
8.1.1.6 Steering System			
8.1.1.7 Fuel System			
8.1.1.8 Electrical System			
8.1.1.9 Electronics			
8.1.2 Sea Trials			
The minimum acceptable sea trial and report is as attached hereto,			

ATTACHMENT I OF APPENDIX II.			
8.1.3 Stability examination per TCMSB TP1332 will require the Contractor to record all stability calculation and trial results and provide a copy for each craft produced, to be placed in the technical manual, and two (2) copies for the Technical Authority.			
8.1.4 Trial Records and Reports: The requirements for recording and maintaining trials records are given in the Contract and applicable Annexes			
8.1.5 Deliverable Documentation: The requirements for deliverable documentation are given in the Contract and applicable Annexes.			
9 BUILDER'S PLATE			
9.1 NATIONAL ASSET CODE			
9.1.1 The National Asset Code for this vessel are as follows:			
9.1.1.1VZE25, delivery to 4217 Argonaut Road Campbell River, British Columbia V9H 1P3. Contact to be supplied after contract award.			
9.1.1 The contractor must add this 5 character code to the builder's plate of each vessel with the prefix "National Asset Code".			
9.2 BUILDER'S PLATE			
9.2.1A Builder's Plate must be affixed to each asset in a readily visible location, e.g. for a boat, in way of the helm position, for a trailer on the left side of the tongue.			
9.2.2The plate must be made of a weather resistant material compatible with that to which it is affixed.			
9.2.3The dimensions of the plate must be not less than 200mm x 125mm			
9.2.4The plate must contain the following information, permanently etched:			
9.2.4.1 National Asset Code;			
9.2.4.2 Naval Architect/Designer;			
9.2.4.3 Builder;			
9.2.4.4 Hull Number;			
9.2.4.5Year of Construction;			
9.2.4.6Lightship Weight in kilograms.			
9.2.5The Builder's Plate must be in both official languages.			
9 SHIPPING AND DELIVERY			
Prior to shipping, the boat is to be			

cleaned, appropriately protected and covered in accordance with the instructions specified in this section.			
10.1 Prior to shipping, the boats must be secured on their respective trailers, cleaned, preserved and covered in accordance with this section. All areas of the boat are to be cleaned prior to covering for shipping. Bilges are to be dry and free of oil and debris and the fuel tanks must be full with fuel stabilizer added.			
10.2 The propulsion system must be preserved in accordance with the manufacturer's recommendations for storage of up to one year in an environment that will be subjected to freezing temperatures.			
10.3 The batteries are to be disconnected. A warning plate is to be tied to the steering wheel with a wire indicating that the boat has been protected for shipping and storage and must not be started until the propulsion machinery has been reactivated.			
10.4 All contact points with the boat are to be padded. A shrink wrap cover is to be provided to protect the boat during shipping and storage.			
10.5 Means of Delivery: For a delivery distance not exceeding 1000 km the Contractor may deliver the vessel/trailer combination on the trailer. Where the delivery distance exceeds 1000 km the trailer may not be utilized as means of delivery			
10 TRAILER			
11.1 The Contractor must supply a dual axle trailer to fit the boat, welded galvanized construction and be rated at least 20% over the anticipated 'normal load' weight of the boat. The trailer must be certified commercial requirements in accordance with Department of Transport regulations for towing the vessel, and be constructed and equipped with the following:			
11.1.1 Trailer to be equipped with axle bearing protection, grease nipple, and flush out kit.			
11.1.2 Brake and turn signal lighting, with 5-prong flat wiring connector. The lighting system must be submersible. (Note requirement for other connector if required for the equipment listed for			

trailer).			
11.1.3Hydraulic surge type, jurisdiction compliant braking system.			
11.1.4Manual bow winch assembly with winch strap and non-corroding snap hook, bow chock, and swivel tongue jack, with wheel. The winch must be of adequate size to launch and recover the vessel and fitted with anti-reverse mechanism.			
11.1.5Heavy-duty 'stand-on' fenders and hitch to accommodate a 2 inch ball;			
11.1.6Bunks and wheel mounted spare tire and carrier, with lug wrench; and side loading guides aft.			
11.1.7Class III weight distributing hitch compliant.			
11.2The contractor must record the trailer sales and registration information and provide the information in each vessel manual.			
<u>12 PROJECT MANAGEMENT</u>			
Project Management requirements are defined in the Contract and applicable Annexes.			
Requirements for detailed technical drawings and other production information including a detailed production schedule are defined in the Contract and applicable Annexes.			
<p align="center">APPENDIX I</p> <p>Final Deliverable Data Package</p> <p>The Final Data Package which must be delivered to Canada is as defined in the Contract, but must include, as a minimum the technical publications identified in this appendix.</p> <p>4.0 Comprehensive Owner/Operator Manuals</p> <p>4.1 Deliverables</p> <p>4.1.1 One (1) complete hard copy and one (1) complete CD electronic copy set of the manuals per vessel delivered for the operator of each vessel, to be delivered with the vessel.</p> <p>4.1.2 One (1) complete hard copy and one (1) complete CD electronic copy set of the manuals per vessel delivered for the Technical Authority, to be delivered to the same address</p>			

<p>identified for invoices.</p> <p>4.2 Content The manuals must provide a physical and functional description of the craft, it's machinery and equipment, as well as delivery testing and sea trial result documentation. The manuals must include as a minimum the following three sections and as detailed below:</p> <ul style="list-style-type: none">• General Information• Technical Information• Spare Parts List <p>4.2.1 GENERAL INFORMATION SECTION The General Information Section must include a description of the arrangement and function of all structures, systems, fittings and accessories that comprise the boat, with illustrations as appropriate:</p> <p>4.2.1.1 Operating procedures;</p> <p>4.2.1.2 Basic operating characteristics (such as temperatures, pressures, flow rates)</p> <p>4.2.1.3 Installation criteria and drawings, assembly and disassembly instructions with comprehensive illustrations showing each step;</p> <p>4.2.1.4 Recommended planned maintenance; and</p> <p>4.2.1.5 Complete troubleshooting procedures.</p> <p>4.2.2 TECHNICAL INFORMATION SECTION The Technical Information Section a complete set of detailed owner / operator instructions, drawings (Section 15), parts lists and supplemental data for all components of the boat (whether acquired from external sources or custom-manufactured).</p> <p>4.2.2.1 "As Fitted", dimensioned drawings must be produced for manuals to record the vessel particulars.</p> <p>4.2.2.2 Plan and Profile, showing the General arrangement; and</p> <p>4.2.2.3 Indication of the Systems arrangement presented with the above drawings covering</p>			
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<p>Bilge, Fuel, Electrical, and propulsion installations.</p> <p>4.2.2.4 Parts list must include the name, part number and serial number if applicable of the parts, items or components and must indicate the supplier (name, address, phone number, email address) of this part, equipment or component and in which part of the specification the item appears.</p> <p>4.2.2.5 Hull Serial Number (HIN), copy of builders plate, TEST and TRIAL results as per completed Attachment 1 of Appendix II, serial or manufacturer's numbers, and equipment warranty cards.</p> <p>4.2.2.6 Engine(s) and equipment: including engine and propulsion serial numbers.</p> <p>4.2.2.7 Acceptance Certificates, and compliance sheets or certificates distributed with equipment i.e. life saving appliances, lifting appliances, engine test reports, calibration certificates, Nav light certificates, Fire suppression material certificates, flotation foam rating sheets</p> <p>4.2.2.8 Pre-trial shop Testing Check Sheet.</p> <p>4.2.2.9 Electronics, (if applicable): including model and serial numbers.</p> <p>4.2.2.10 Regulatory and Stability documentation: as required per TP 1332, which, references ISO12217 or ISO 6185 for RIBs (if applicable).</p> <p>4.2.3 SPARE PARTS LIST SECTION</p> <p>The Spare Parts List section must include a list of recommended initial onboard spare parts to be stocked for the vessel. The list must include the name, part number and serial number if applicable of the parts, items or components and must indicate the supplier (name, address, phone number, email address) of this part, equipment or component and in which part of the TSOR the item appears. At a minimum this list must include the</p>			
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<p>following items (as applicable):</p> <p>4.2.3.1 Propulsion: Propellers, filters, water pump impeller, batteries, throttle and shift cables, special engine tools.</p> <p>4.2.3.2 Electrical: panel breakers, fuses, light bulbs;</p> <p>4.2.3.3 Boat Structures and Fittings: Miscellaneous commonly used fasteners.</p> <p>5.0 ADDITIONAL DELIVERABLE DOCUMENTATION</p> <p>The following additional documentation must be delivered with each vessel:</p> <p>5.1 Tonnage Registration Certificate in accordance with TP 13430 - http://www.tc.gc.ca/eng/marines/afety/svcp-gt-3948.htm</p> <p>5.2 A completed and signed copy of the Small Vessel Compliance Program SVCP for the vessel delivered. Website: http://www.tc.gc.ca/eng/marines/afety/svcp-menu-3633.htm</p> <p>5.3 Two Bill of Sales per vessel delivered, one for the vessel and a second for the trailer with a valid Motor Vehicle Registration Certificate for the relevant Province of delivery.</p> <p style="text-align: center;">APPENDIX II Sea Trials</p> <p>1.0 Sea trials must be conducted by the Contractor to demonstrate the vessel and its equipment conform to the requirements as stated in the Contract. All expenses incident to the trials must be borne by the Contractor, including fuel unless otherwise specified. A crew provided by the Contractor must operate the vessel during sea trials. Residual fuel, if not drained for shipping, must be delivered in its tank with the vessel.</p> <p>2.0 All Sea Trial instrumentation and equipment must be furnished and operated by the Contractor. Trial instrumentation, where applicable, must not replace the vessel's instruments (e.g., engine tachometer, pressure gauges, and thermometers). The Contractor</p>			
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must furnish all necessary hardware and fittings and must install the measuring devices. After satisfactory completion of the trials, all instrumentation must be removed and all systems restored to their original condition. The Contractor must provide two (2) copies of the calibration data certifying the accuracy of the instrumentation for the tests and include it in the technical publications

3.0 The Contractor must submit a Test & Trials Plan, including a description of all of the acceptance trials to be performed. As a minimum, Using Attachment I, modified to suit these vessels, the following trials must be conducted: (the vessel must operate in the Normal Load Condition.)

3.1.1 Speed Trials - The speed trials must be done over a course at least one (1) nautical mile in length. Two (2) runs must be made over the course, one (1) in each direction with the speeds for the two (2) runs averaged. The use of GPS data (averaged) is acceptable.

3.1.2 Endurance Trial - The boat must operate at maximum speed for a minimum of ten (10) minute intervals in the Fully Loaded Condition over one (1) hour period considering the break in procedures of the equipment. During the endurance trials, it must be demonstrated that all parts of the propulsion system are in full operation. All systems must be operated to check for proper lubrication, control and alignment. Fuel consumption must be recorded for the one-hour trial

3.1.3 Astern Propulsion - The vessel must be operated and manoeuvred using astern propulsion to establish the astern performance. During the backing performance tests the throttles must be set to provide 1/3 of the rated engine

<p>horsepower. In order to demonstrate astern performance of the engines in an emergency stop and to test the strength of the foundations, the engine must be subjected to two stops from full power ahead at maximum speed to dead in the water using reverse thrust. Time required to perform this trial must be recorded.</p> <p>3.1.4 Steering Gear - Tests must be conducted on the steering gear to demonstrate the adequacy of the steering system under all operations. Manoeuvring tests must be performed to ensure that the vessel meets the stated requirements. Manoeuvring trials must be conducted in the Normal Load Condition and repeated in the Full Load Condition.</p> <p>3.1.5 The Contractor must provide a Tests & Trials Sheet, (Attachment 1) for each boat and include this sheet in the technical publications.</p> <p>3.1.6 Public Works and Government Services Canada Contract Authority and Technical Authority must be notified no less than 2 weeks prior to sea trials. The Technical Authority will witness and attend the sea trials. Sea trial results must be forwarded to the Technical Authority prior to delivery of the vessel.</p> <p>3.1.7 At the conclusion of sea trials each vessel must be thoroughly cleaned and inspected. Engine cooling systems must be flushed through with fresh water. The Contractor must repair any damage to the vessel or ancillary equipment resulting from sea trials, to the satisfaction of the Technical Authority.</p> <p>3.1.8 For the purpose of the trials, Normal Loaded Condition must be considered to be the basic vessel, fitted with all normal equipment, full fuel, with complement and loads per</p>			
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Solicitation No. - N° de l'invitation
F7047-150016 /A
Client Ref. No. - N° de réf. du client
F7047-150016

Amd. No. - N° de la modif.
File No. - N° du dossier
XLV-5-38088

Buyer ID - Id de l'acheteur
xlv166
CCC No./N° CCC - FMS No./N° VME

Vessel Particulars, (see section 4.1.9).			
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Evaluator Name: _____ Date: _____

Evaluator Name: _____ Date: _____

Evaluator Name: _____ Date: _____