

**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**

<b>Title - Sujet</b> Floating Wave Attenuator	
<b>Solicitation No. - N° de l'invitation</b> W0103-166683/A	<b>Date</b> 2015-07-22
<b>Client Reference No. - N° de référence du client</b> W0103-166683	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$XLV-242-6784	
<b>File No. - N° de dossier</b> XLV-5-38053 (242)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2015-08-12</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Pacific Daylight Saving Time PDT
<b>F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input checked="" type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Szczesniak, Michal	<b>Buyer Id - Id de l'acheteur</b> xlV242
<b>Telephone No. - N° de téléphone</b> (250) 363-8312 ( )	<b>FAX No. - N° de FAX</b> ( ) -
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> NATIONAL DEFENCE 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

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

Solicitation No. - N° de l'invitation

**W0103-166683/A**

Client Ref. No. - N° de réf. du client

W0103-166683

Amd. No. - N° de la modif.

File No. - N° du dossier

XLV-5-38053

Buyer ID - Id de l'acheteur

xlv242

CCC No./N° CCC - FMS No/ N° VME

**Solicitation  
W0103-166683/A**

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## **PART 1 - GENERAL INFORMATION**

### **1.1 Introduction**

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides Bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications: includes the certifications to be provided;
- Part 6 Security, Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Requirement, the Insurance Requirements, the Basis of Payment, and any other annexes.

### **1.2 Summary**

The Department of National Defence requires a floating wave attenuator to be designed, fabricated, assembled, and delivered to significantly reduce wave action entering a designated area within Esquimalt Harbour in British Columbia, Canada. While the intent is to have the installation of the floating wave attenuator performed by others, installation of the floating wave attenuator may also be required and is included as an option.

As per the Integrity Provisions under section 01 of *Standard Instructions 2003*, Bidders must provide a list of all owners and/or Directors and other associated information as required. Refer to section [4.21](#) of the *Supply Manual* for additional information on the Integrity Provisions.

The requirement is subject to the provisions of the Agreement on Internal Trade (AIT).

The requirement is subject to a preference for Canadian goods and/or services.

The Federal Contractors Program (FCP) for employment equity applies to this procurement; see Part 5 - Certifications, Part 7 - Resulting Contract Clauses and the annex titled [Federal Contractors Program for Employment Equity - Certification](#).

### **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 from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

## **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-manual>) 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.

### **2.2 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

### **2.3 Enquiries - Bid Solicitation**

All enquiries must be submitted in writing to the Contracting Authority no later than 14 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 14 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 (2 hard copies and 1 soft copy on CD, DVD, or USB stick)
- Section II: Financial Bid (1 hard copies and 1 soft copy on CD, DVD, or USB stick)
- Section III: Certifications (1 hard copies and 1 soft copy on CD, DVD, or USB 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 (216 mm 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) (<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.

#### **3.1.1 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 and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

#### **3.1.2 Section II: Financial Bid**

Bidders must submit their financial bid in accordance with the Financial Bid Presentation Sheet detailed in Annex D and Appendix 1 to Annex D (Pricing Data Sheet). The total amount of Applicable Taxes must be shown separately.

##### **3.1.2.1 Exchange Rate Fluctuation**

The requirement does not offer exchange rate fluctuation risk mitigation. Requests for exchange rate fluctuation risk mitigation will not be considered. All bids including such provision will render the bid non-responsive.

#### **3.1.3 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.
- (c) The evaluation team will determine first if there are two or more bids with a valid Canadian Content certification. In that event, the evaluation process will be limited to the bids with the certification; otherwise, all bids will be evaluated. If some of the bids with a valid certification are declared non-responsive, or are withdrawn, and less than two responsive bids with a valid certification remain, the evaluation will continue among those bids with a valid certification. If all bids with a valid certification are subsequently declared non-responsive, or are withdrawn, then all the other bids received will be evaluated.

#### **4.1.1 Technical Evaluation**

Technical bids will be evaluated in accordance with Annex E.

#### **4.1.2 Financial Evaluation**

Financial bids will be evaluated in accordance with Annex D.

### **4.2 Basis of Selection**

- 1. To be declared responsive, a bid must:
  - (a) comply with all the requirements of the bid solicitation; and
  - (b) meet all mandatory criteria.
- 2. Bids not meeting (a) or (b) will be declared non-responsive.
- 3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 60% for the technical merit and 40% for the price.
- 4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows:  
total number of points obtained / maximum number of points available multiplied by the ratio of 60%.
- 5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 40%.
- 6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
- 7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is \$45,000 (45).

**Basis of Selection - Highest Combined Rating Technical Merit (50%) and Price (50%)**

		<b>Bidder X</b>	<b>Bidder Y</b>	<b>Bidder Z</b>
<b>Overall Technical Score</b>		115 / 135	89 / 135	92 / 135
<b>Bid Evaluated Price</b>		\$55,000.00	\$50,000.00	\$45,000.00
<b>Calculations</b>	<b>Technical Merit Score</b>	$115 / 135 \times 60$ = 51.11	$89 / 135 \times 60$ = 39.56	$92 / 135 \times 60$ = 40.89
	<b>Pricing Score</b>	$45 / 55 \times 40$ = 32.73	$45 / 50 \times 40$ = 36.00	$45 / 45 \times 40$ = 40.00
<b>Combined Rating</b>		83.84	75.56	80.89
<b>Overall Rating</b>		1 <sup>st</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>

## **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

Bidders must provide the required certifications and additional 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 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 to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will 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.

#### **5.1.2 Additional Certifications Required with the Bid**

##### **5.1.2.1 Canadian Content Certification**

This procurement is conditionally limited to Canadian goods.

Subject to the evaluation procedures contained in the bid solicitation, bidders acknowledge that only bids with a certification that the good(s) offered are Canadian goods, as defined in clause A3050T, may be considered.

Failure to provide this certification completed with the bid will result in the good(s) offered being treated as non-Canadian goods.

The Bidder certifies that:

( ) the good(s) offered are Canadian goods as defined in paragraph 1 of clause A3050T.

**5.1.2.1.1** SACC *Manual* clause [A3050T](#) (2014-11-27) Canadian Content Definition

### **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 specified 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.

### 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](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](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.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex [Federal Contractors Program for Employment Equity - Certification](#), before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

### 5.2.3 Education and Experience

The Bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the Bidder to be true and accurate. Furthermore, the Bidder warrants that every individual proposed by the Bidder for the requirement is capable of performing the Work described in the resulting contract.

### 5.2.4 Welding Certification

1. Welding must be performed by a welder certified by the Canadian Welding Bureau and in accordance with the requirements of the following Canadian Standards Association (CSA) standards: CSA W47.1-09 (R2014), Certification of Companies for Fusion Welding of Steel (Minimum Division Level 2.1).
2. Before contract award and within 5 business days of the written request by the Contracting Authority, the successful Bidder must submit evidence demonstrating its certification to the welding standards.

### **5.2.5 Workers Compensation Certification - Letter of Good Standing**

The Bidder must have an account in good standing with the applicable provincial or territorial Workers' Compensation Board.

The Bidder must provide, within 5 business days following a request from the Contracting Authority, a certificate or letter from the applicable Workers' Compensation Board confirming the Bidder's good standing account. Failure to comply with the request may result in the bid being declared non-responsive.

### **5.2.6 Status and Availability of Resources**

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability.

## **PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS**

### **6.1 Insurance Requirements**

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 Annex C.

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.

## PART 7 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation:

### 7.1 Requirement

The Contractor must provide the items detailed in Annex A.

#### 7.1.1 Contract Financial Security

0. The Contractor must provide one of the following contract financial securities within 10 calendar days after the date of contract award:
  - a. a performance bond form [PWGSC-TPSGC 505](#) and a labour and material payment bond form [PWGSC-TPSGC 506](#), each in the amount of 50 percent of the Contract Price; or
  - b. a security deposit as defined in clause [E0008C](#) in the amount of 10 percent of the Contract Price.

Any bond must be accepted as security by one of the bonding companies listed in [Treasury Board Contracting Policy, Appendix L](#), Acceptable Bonding Companies.

2. Security deposits in the form of government guaranteed bonds with coupons attached will be accepted only if all coupons that are unmaturing, at the time the security deposit is provided, are attached to the bonds. The Contractor must provide written instructions concerning the action to be taken with respect to coupons that will mature while the bonds are pledged as security, when such coupons are in excess of the security deposit requirement.
3. If Canada does not receive the required financial security within the specified period, Canada may terminate the Contract for default pursuant to the Contract default provision.
4. Security Deposit Definition - Contract
  1. "security deposit" means
    - a. a bill of exchange that is payable to the Receiver General for Canada and certified by an approved financial institution or drawn by an approved financial institution on itself; or
    - b. a government guaranteed bond; or
    - c. an irrevocable standby letter of credit, or
    - d. such other security as may be considered appropriate by the Contracting Authority and approved by Treasury Board;
  2. "approved financial institution" means
    - a. any corporation or institution that is a member of the Canadian Payments Association;
    - b. a corporation that accepts deposits that are insured by the Canada Deposit Insurance Corporation or the Régie de l'assurance-dépôts du Québec to the maximum permitted by law;

- c. a credit union as defined in paragraph 137(6) of the [Income Tax Act](#);
  - d. a corporation that accepts deposits from the public, if repayment of the deposits is guaranteed by a Canadian province or territory; or
  - e. the Canada Post Corporation.
3. "government guaranteed bond" means a bond of the Government of Canada or a bond unconditionally guaranteed as to principal and interest by the Government of Canada that is:
- a. payable to bearer;
  - b. accompanied by a duly executed instrument of transfer of the bond to the Receiver General for Canada in accordance with the [Domestic Bonds of Canada Regulations](#);
  - c. registered in the name of the Receiver General for Canada.
4. "irrevocable standby letter of credit"
- a. means any arrangement, however named or described, whereby a financial institution (the "Issuer"), acting at the request and on the instructions of a customer (the "Applicant"), or on its behalf,
    - i. will make a payment to or to the order of Canada, as the beneficiary;
    - ii. will accept and pay bills of exchange drawn by Canada;
    - iii. authorizes another financial institution to effect such payment, or accept and pay such bills of exchange; or
    - iv. authorizes another financial institution to negotiate, against written demand(s) for payment, provided that the conditions of the letter of credit are complied with.
  - b. must state the face amount which may be drawn against it;
  - c. must state its expiry date;
  - d. must provide for sight payment to the Receiver General for Canada by way of the financial institution's draft against presentation of a written demand for payment signed by the authorized departmental representative identified in the letter of credit by his/her office;
  - e. must provide that more than one written demand for payment may be presented subject to the sum of those demands not exceeding the face amount of the letter of credit;
  - f. must provide that it is subject to the International Chamber of Commerce (ICC) Uniform Customs and Practice (UCP) for Documentary Credits, 2007 Revision, ICC Publication No. 600. Pursuant to the ICC UCP, a credit is irrevocable even if there is no indication to that effect; and
  - g. must be issued (Issuer) or confirmed (Confirmer), in either official language, by a financial institution that is a member of the Canadian Payments Association and is on the

letterhead of the Issuer or Confirmer. The format is left to the discretion of the Issuer or Confirmer.

5. Term of Financial Security

Any bond, bill of exchange, letter of credit or other security provided by the Contractor to Canada in accordance with the terms of the Contract must not expire before 90 days after the completion date indicated in the Contract.

Provided that no risk will accrue to Canada as a result, The Contracting Authority can, at its sole discretion, return the financial security to the Contractor before the expiration date indicated in the Contract.

**7.1.2 Optional Goods and/or Services**

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Section G of Annex A of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The options 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 options within 270 calendar days after contract award by sending a written notice to the Contractor.

**7.1.3 Procedures for Design Change or Additional Work**

These procedures must be followed for any design change or additional work.

1. When Canada requests design change or additional work:
  - a. The Technical Authority will provide the Contracting Authority with a description of the design change or additional work in sufficient detail to allow the Contractor to provide the following information:
    - i. any impact of the design change or additional work on the requirement of the Contract;
    - ii. a price breakdown of the cost (increase or decrease) associated with the implementation of the design change or the performance of the additional work using either the form [PWGSC-TPSGC 1686](#) Quotation for Design Change or Additional Work, or the form [PWGSC-TPSGC 1379](#) Work Arising or New Work.
    - iii. a schedule to implement the design change or to perform the additional work and the impact on the contract delivery schedule.
  - b. The Contracting Authority will then forward this information to the Contractor.
  - c. The Contractor will return the completed form to the Contracting Authority for evaluation and negotiation. Once agreement has been reached, the form must be signed by all parties in the appropriate signature blocks. This constitutes the written authorization for the Contractor to proceed with the work, and the Contract will be amended accordingly.

2. When the Contractor requests design change or additional work:
  - a. The Contractor must provide the Contracting Authority with a request for design change or additional work in sufficient detail for review by Canada.
  - b. The Contracting Authority will forward the request to the Technical Authority for review.
  - c. If Canada agrees that a design change or additional work is required, then the procedures detailed in paragraph 1 are to be followed.
  - d. The Contracting Authority will inform the Contractor in writing if Canada determines that the design change or additional work is not required.
3. Approval  
The Contractor must not proceed with any design change or additional work without the written authorization of the Contracting Authority. Any work performed without the Contracting Authority's written authorization will be considered outside the scope of the Contract and no payment will be made for such work.

## **7.2 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-manual)(<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

### **7.2.1 General Conditions**

2030 (2015-07-03), General Conditions - Higher Complexity - Goods, and 1031-2 (2012-07-16), Contract Cost Principles, apply to and form part of the Contract.

### **7.2.2 Supplemental General Conditions**

4006 (2010-08-16), Contractor to Own Intellectual Property Rights in Foreground Information, apply to and form part of the Contract.

## **7.3 Security Requirements**

There is no security requirement applicable to this Contract.

## **7.4 Term of Contract**

### **7.4.1 Complete Delivery**

The Contractor must make the complete delivery within 180 calendar days from the effective date of the Contract.

#### **7.4.2 Failure to Deliver**

Delivery is an essential part of this contract. Except for excusable delays notified in accordance with Section 11 of 2030 General Conditions - Higher Complexity - Goods, failure to deliver by the date(s) specified in this Contract will prejudice the Government of Canada and will, at the Government of Canada's discretion, entail either:

- (a) Contract Termination in accordance with 2030 General Conditions Sections 10 (Time of the Essence) and 30 (Default by the Contractor); or
- (b) Consideration for Contract Amendment. Delivery date(s) will not be extended without consideration being provided by the Contractor in the form of adjustment to the price, warranty, quantity and / or service to be provided.

#### **7.5 Authorities**

##### **7.5.1 Contracting Authority**

The Contracting Authority for the Contract is:

Michal Szczesniak  
Public Works and Government Services Canada  
Pacific Region, Acquisitions, Marine  
401-1230 Government Street, Victoria, B.C., V8W 3X4  
Telephone: 250.363.8312  
E-mail: michal.szczesniak@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.

##### **7.5.2 Technical Authority**

The Technical Authority for the Contract is:

- TBA

The Technical Authority 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.

##### **7.5.3 Inspection Authority**

The Technical Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the Requirements at Annex A and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment. Any communication with a Contractor regarding the quality of the Work performed pursuant to this Contract shall be undertaken by official correspondence through the Contracting Authority.

The Inspection Authority may designate, and be represented by, an Inspector (TI), Quality Assurance Representative (QAR) or Designated Engineering Authority (DEA).

#### 7.5.4 Quality Assurance Authority

All work is subject to Government Quality Assurance performed at the Contractor's or subcontractor's facility, and at the installation site, by the Director of Quality Assurance, or its designated Quality Assurance Representative (QAR).

Director of Quality Assurance  
National Defence Headquarters  
MGen George R. Pearkes Building  
101 Colonel By Drive  
Ottawa, ON K1A 0K2  
E-mail: [ContractAdmin.DQA@forces.gc.ca](mailto:ContractAdmin.DQA@forces.gc.ca)

Within forty-eight (48) hours of contract award, the Contractor must contact the QAR. The name, location and phone number of the QAR can be obtained from the nearest National Defence Quality Assurance Region (NDQAR) listed below:

British Columbia - Victoria 250-363-5662

The Contractor is responsible for performing, or having performed, all inspections and tests necessary to substantiate that the material or services provided conform to the requirements of the Contract.

The Contractor must provide, at no additional cost, all applicable test data, all technical data, test pieces and samples as may reasonably be required by the QAR to verify conformity to the requirements of the Contract. The Contractor must forward at its expense such technical data, test data, test pieces and samples to such location as the QAR may direct.

Quality control, inspection and test records that substantiate conformity 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 QAR upon request.

#### 7.5.5 Contractor's Representative

Contact information for the proposed Contractor's Representative(s):

Contact for:	Name	Telephone	Email
Contracting issues			
Technical issues			
Invoicing issues			

#### 7.6 Payment

##### 7.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be a paid firm price, as specified in Annex B for a cost of \$ \_\_\_\_\_. Customs duties are included and Applicable Taxes are extra.

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.

### 7.6.2 Milestone Payments

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Contract and the payment provisions of the Contract if:

- a. an accurate and complete claim for payment using [PWGSC-TPSGC 1111](#), Claim for Progress Payment, <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>, and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b. all the certificates appearing on form [PWGSC-TPSGC 1111](#) have been signed by the respective authorized representatives;
- c. all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

### 7.6.3 Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

<b>Milestone</b>	<b>Milestone Description</b>	<b>Portion of the Firm Total Contract Price</b> (Applicable Taxes are extra)	<b>Projected Date</b>
1	Design completed with final review, design calculations, and 90% drawings	7%	
2	Form work and base steel work completed and inspected	10%	
3	Upper steel work and flotation installation completed and inspected	10%	
4	Concrete pour completed and inspected	23%	
5	Delivery of FWA and all remaining documentation completed and acceptance on site	47%	
6	90 calendar days after Milestone 5 is achieved	3%	

### 7.6.4 Time Verification

Time charged and the accuracy of the Contractor's time recording system are subject to verification by Canada, before or after payment is made to the Contractor. If verification is done after payment, the Contractor must repay any overpayment, at Canada's request.

### **7.6.5 Lien – Section 427 of the Bank Act**

1. If any lien under section 427 of the [Bank Act](#), S.C.. 1991, c. 46, exists in respect to any materials, parts, work-in-process, or finished work for which the Contractor intends to claim payment, the Contractor agrees to inform the Contracting Authority without delay and agrees, unless instructed otherwise by the Contracting Authority, either:
  - a. to cause the bank to remove such lien and to provide the Contracting Authority with written confirmation from the bank; or,
  - b. to provide to the Contracting Authority an undertaking from the bank that the bank will not make any claim under section 427 of the [Bank Act](#) on materials, parts, work-in-process, or finished work in respect of which payment is made to the Contractor under the Contract.
2. Failure to inform the Contracting Authority of such lien or failure to implement paragraph 1(a) or (b) above will constitute default under the default section of the general conditions and will entitle Canada to terminate the Contract.

### **7.7 Invoicing Instructions**

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
2. Invoices must be distributed as follows:
  - a. The original and one (1) copy must be forwarded to the following address for certification and payment:  
TBA
  - b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

### **7.8 Certifications**

#### **7.8.1 Compliance**

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing additional information are conditions of the Contract. Certifications are subject to verification by Canada during the entire period of the Contract. If the Contractor does not comply with any certification, fails to provide the additional information, or if 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.

#### **7.8.2 Federal Contractors Program for Employment Equity - Default by the Contractor**

The Contractor understands and agrees that, when an Agreement to Implement Employment Equity (AIEE) exists between the Contractor and Employment and Social Development Canada (ESDC)-Labour, the AIEE must remain valid during the entire period of the Contract. If the AIEE becomes invalid, the name of the Contractor will be added to the "[FCP Limited Eligibility to Bid](#)" list. The imposition of such a sanction by ESDC will constitute the Contractor in default as per the terms of the Contract.

### 7.8.3 Canadian Content Certification

1. The Contractor warrants that the certification of Canadian Content submitted by the Contractor is accurate and complete, and that the goods, services or both to be provided under the Contract are in accordance with the definition contained in clause A3050T.
2. The Contractor must keep proper records and documentation relating to the origin of the goods, services or both provided to Canada. The Contractor must not, without obtaining before the written consent of the Contracting Authority, dispose of any such records or documentation until the expiration of six (6) years after final payment under the Contract, or until settlement of all outstanding claims and disputes under the Contract, whichever is later. All such records and documentation must at all times during the retention period be open to audit, inspection and examination by the representatives of Canada, who may make copies and take extracts. The Contractor must provide all facilities for such audits, inspections and examinations, and must furnish all such information as the representatives of Canada may from time to time require with respect to such records and documentation.
3. Nothing in this clause must be interpreted as limiting the rights and remedies which Canada may otherwise have pursuant to the Contract.

#### Canadian Content Definition

1. Canadian good: A good wholly manufactured or originating in Canada is considered a Canadian good. A product containing imported components may also be considered Canadian for the purpose of this policy when it has undergone sufficient change in Canada, in a manner that satisfies the definition specified under the North American Free Trade Agreement (NAFTA) Rules of Origin. For the purposes of this determination, the reference in the NAFTA Rules of Origin to "territory" is to be replaced with "Canada".(Consult Annex 3.6 (9) of the Supply Manual.)
2. Canadian service: A service provided by an individual based in Canada is considered a Canadian service. Where a requirement consists of only one service, which is being provided by more than one individual, the service will be considered Canadian if a minimum of 80 percent of the total bid price for the service is provided by individuals based in Canada.
3. Variety of goods: When requirements consist of more than one good, one of the two methods below is applied:
  - a. aggregate evaluation: no less than 80 percent of the total bid price must consist of Canadian goods; or,
  - b. item by item evaluation: in some cases, the bid evaluation may be conducted on an item-by-item basis and contracts may be awarded to more than one supplier. In these cases, suppliers will be asked to identify separately each item that meets the definition of Canadian goods.
4. Variety of services: For requirements consisting of more than one service, a minimum of 80 percent of the total bid price must be provided by individuals based in Canada.
5. Mix of goods and services: When requirements consist of a mix of goods and services, no less than 80 percent of the total bid price must consist of Canadian goods and services (as defined above).  
For more information on how to determine the Canadian content for a mix of goods, a mix of services or a mix of goods and services, consult Annex 3.6 (9), Example 2, of the Supply Manual.
6. Other Canadian goods and services: Textiles: Textiles are considered to be Canadian goods according to a modified rule of origin, copies of which are available from the Clothing and Textiles Division, Commercial and Consumer Products Directorate.

## 7.9 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in \_\_\_\_\_.

## 7.10 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.

- (a) the Articles of Agreement;
- (b) the supplemental conditions 4006 (2010-08-16), Contractor to Own Intellectual Property Rights in Foreground Information;
- (c) the general conditions 1031-2 (2012-07-16), Contract Cost Principles;
- (d) the general conditions 2030 (2015-07-03), General Conditions - Higher Complexity - Goods;
- (e) Annex A, Requirement;
- (f) Annex B, Basis of Payment;
- (g) Annex C, Insurance Requirements;
- (h) the Contractor's bid dated \_\_\_\_\_.

## 7.11 Defence Contract

The Contract is a defence contract within the meaning of the [Defence Production Act](#), R.S.C. 1985, c. D-1, and must be governed accordingly.

Title to the Work or to any materials, parts, work-in-process or finished work must belong to Canada free and clear of all claims, liens, attachments, charges or encumbrances. Canada is entitled, at any time, to remove, sell or dispose of the Work or any part of the Work in accordance with section 20 of the [Defence Production Act](#).

## 7.12 Insurance Requirements

The Contractor must comply with the insurance requirements specified in Annex C. 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. For Canadian-based Contractors, coverage must be placed with an Insurer licensed to carry out business in Canada, however, for Foreign-based Contractors, coverage must be placed with an Insurer with an A.M. Best Rating no less than "A-". The Contractor must, if requested by the Contracting Authority, forward to Canada a certified true copy of all applicable insurance policies.

### **7.13 Canadian Forces Site Regulations**

The Contractor must comply with all standing orders or other regulations, instructions and directives in force on the site where the Work is performed.

### **7.14 Workers Compensation**

The Contractor must maintain its account in good standing with the applicable provincial or territorial Workers' Compensation Board for the duration of the Contract.

### **7.15 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: CSA W47.1-09 (R2014), Certification of Companies for Fusion Welding of Steel (Minimum Division Level 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.

### **7.16 Trade Qualifications**

The Contractor must use qualified, certificated (if applicable) and competent tradespeople and supervision to ensure a uniform high level of workmanship. The Inspection 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.

### **7.17 Inspection and Acceptance**

The Technical Authority is the Inspection Authority. All reports, deliverable items, documents, goods and all services rendered under the Contract are subject to inspection by the Inspection Authority or representative. Should any report, document, good or service not be in accordance with the requirements of the Statement of Work and to the satisfaction of the Inspection Authority, as submitted, the Inspection Authority will have the right to reject it or require its correction at the sole expense of the Contractor before recommending payment.

## ANNEX A - REQUIREMENT

### A. Objective

The Department of National Defence (DND) requires a floating wave attenuator (FWA) meeting all requirements established herein to significantly reduce wave action entering a designated area within Esquimalt Harbour in British Columbia, Canada.

The purpose of the FWA is to provide wave protection for Jetty D to maintain effective operations, during the implementation of major jetty infrastructure projects, By providing protection in the form of a FWA, Jetty D can be utilized as an all-weather, multi-season berthing facility.

While the intent is to have the installation of the FWA performed by others, installation of the FWA by the Contractor may be required and is included as an option as per Article 7.1.2 of the resulting Contract.

### B. Technical Requirements

1. The Contractor must design, fabricate, assemble, and deliver the FWA for installation within an area of Esquimalt Harbour in British Columbia, Canada identified in Section J (Wave Climate Study).

The FWA must provide the required performance specified in Section J.

The FWA also consists of all reinforced and/or pre-stressed concrete, pontoon(s), mooring system (including chains), seabed gravity anchors, mooring cleats, navigational lights, wear strips, safety ladders, and appurtenances that form part of the FWA.

2. The Contractor must take advantage of existing floating breakwater designs, known existing performance characteristics, known fabrication techniques and known installation techniques. These may include proprietary floating breakwater designs. The Contractor must have a proven product line of similar nature. The Contractor may custom design the FWA as long as it stems from a pre-existing product line.
3. The primary material of the FWA must be concrete. Durability requirements for concrete must be in accordance with CSA A23.1/ A23.2 for concrete with a minimum life of 50 years.

All concrete must meet the specifications detailed in Section I (Concrete Specifications).

All materials must resist corrosion, erosion, rot, and require minimal maintenance.

The 50 years minimum life of the concrete to must be designed and assured by considering:

- a. corrosion protection measures for concrete incl. extra cover over reinforcement;
- b. rigid crack control criteria;
- c. denser concrete mix design;
- d. lower water/cement ratio;
- e. admixtures such as fly ash or silica fume to reduce permeability;
- f. chemical anti-corrosion admixtures;
- g. cathodic protection of the reinforcing steel;
- h. surface treatments such as silanes; and
- i. use service life modeling software to predict design life cycle expectations for advanced concrete mixes.

4. The FWA must be closed on all sides, concrete filled with foam flotation blocks embedded.
5. The preferred FWA section shape is rectangular. Alternate shapes may be proposed. The design may be single monolithic structure or a combination of monolithic structures placed or connected together to provide the required level of wave protection. The design of sections must include details to prevent cracking which might cause deterioration of concrete or other structural elements.
6. The overall dimensions of the FWA must be determined and optimized by the Contractor.
7. The FWA must meet the minimum acceptable performance requirements specified in Section J.
8. The FWA must allow for the berthing of vessels including but not limited to:
  - (a) Orca Class Patrol Craft Training Vessels (PCT); and
  - (b) Glen Class Tug (1975).
9. The FWA must have eight equally spaced cleats per each long side of the FWA. The load capacity of the cleats must be 4.00 T minimum (SWL) in any direction. The cleats must be 400mm long at the top, 200mm high above the deck.
10. The FWA must have an easily replaceable wear strip along all sides of the FWA to prevent vessel hulls from contacting the structural portions of the FWA. If wood is used, its preservative treatment must be in accordance with CSA O80, Wood Preservation.
11. The FWA must have a red marine light at each of the three (3) seaward corners. The Contractor must design and install a power system for the lights, complete with solar cells and batteries, in a weather tight enclosure, capable of not requiring maintenance or repairs due to full range of weather. Lighting and power system to be capable of maintaining illumination throughout the year. The lights must be steady red with a range of 2.0 NM. The lights must comply with The Canadian Aids to Navigation System 2011 by FOC and CCG and An Owner's Guide to Private Aids to Navigation CCG 2000 Edition.
12. The FWA must have recessed safety ladders all around the FWA at a maximum spacing of 30m.
13. Other than the appurtenances above, the FWA deck and sides must be free from obstructions.
14. The FWA must have sufficient mooring chains and concrete anchor blocks to withstand the expected extreme environmental conditions including but not limited to wind, currents, waves, tide, storm related water levels, sea level rise, seismic (tsunami), and ocean water properties such as salinity and temperature, in the designated area without requiring repair or relocation.
15. The FWA structure must be free floating, easily relocated, complete with mooring system including anchors. The Contractor must show how the FWA structure is relocated utilizing the crane barge identified in Section H (Floating Crane Technical Data).
16. The FWA and mooring system must be designed by the Contractor to remain in place and survive all weather conditions without requiring any repairs or adjustments.
17. The mooring system including anchors must be designed by the Contractor to be easily deployed and relocated in the future by a floating crane with the specifications outlined in Section H.
18. The mooring lines must be chain. Chain and all attachments must be a minimum Grade 3 of hardened steel. All chain and fittings must be load rated.

19. The FWA must be designed and fabricated for an expected service lifespan of 50 years with 5 years between scheduled maintenance inspections for all components of the mooring system.
20. All FWA components including the mooring system must be easily serviced with a floating crane with the specifications outlined in Section H.
21. The mooring system including chain length must minimize movement of the FWA.

The maximum horizontal movement of any FWA part must be in accordance with Requirement 22 (Design Loads) below.

22. Design Loads

The FWA design must account for the following parameters and the Contractor must demonstrate how the FWA mitigates these parameters:

- (a) Design freeboard (Dead Load - DL only including utilities) between 600 and 800mm;
- (b) The Environmental Loads identified in Section J:
  - (1) Water Levels;
  - (2) Wind;
  - (3) Currents;
  - (4) Waves;
  - (5) Seismic, including tsunami;
  - (6) Floating Large Wood Debris including Root Balls;
  - (7) Floating Ice Impact;
  - (8) Waves from Ship Traffic; and
  - (9) Withstand hogging and sagging;
- (c) Operational Loads:
  - (1) Design vessels (Orca Class and Glen Class); and
  - (2) UDLL 3.0 kPa and one GVW 12,500 kg at any location;
- (d) Dead Loads:
  - (1) Weight of the FWA structure; and
  - (2) Utilities;
- (e) Other:
  - (1) The metacentric height (GM) must not be less than 1.40 metre (m) in operating, transit and design weather conditions; and
  - (2) The FWA must remain stable and maintain minimum freeboard of 600mm at all conditions;
- (f) Load Combinations:

The FWA must withstand the following load conditions:

  - (1) Apply all applicable load combinations under the given environmental scenarios in Section J;
  - (2) Apply a maximum 100mm heave differential between segments (if applicable) for connections with a hinge type behavior;
  - (3) Drag tension capacity to withstand worst load combination;

- (4) Impact loading capacity to withstand worst load combination;
- (5) Apply a maximum chain tension to two mooring wells on opposite corners of FWA with lateral forces and hogging and sagging wave;
- (6) During extreme load combinations, the FWA must not be displaced more than  $\pm 2.5\text{m}$  from its mean operating envelope; and
- (7) Mooring system capacity must allow for absence of one mooring leg, for any reason, on loaded side of system.

23. Materials

- (a) The FWA must be fabricated from new materials only.
- (b) The Contractor must use products of one manufacturer for material and equipment of the same type or classification unless otherwise specified.
- (c) The Contractor must comply with suppliers' and manufacturers' latest instructions for materials, storage, and installation methods unless otherwise specified.
- (d) All metal fastenings and accessories of the FWA must be in the same texture, color and finish as base metal in which they occur.
- (e) The FWA must be fabricated in a way that prevents electrolytic action between dissimilar metals.
- (f) Non-corrosive fasteners, anchors and spacers must be used for securing exterior work on the FWA.
- (g) All fastenings used on the FWA must be standard commercial sizes and patterns with material and finish suitable for service.
- (h) Heavy hexagon heads, semi-finished must be used on the FWA unless otherwise specified.
- (i) Bolts must not project more than 1 diameter beyond nuts.
- (j) The Contractor must deliver, store and maintain packaged material and equipment with manufacturer's seals and labels intact.
- (k) The Contractor must prevent damage, adulteration and soiling of products during delivery, handling and storage, and immediately remove rejected products from the site.

24. Timber

For any and all timber used in the FWA:

- (a) The timber must be NLGA, No.1 Structural Grade Coast Douglas Fir conforming to NLGA Standard Grading Rules for Canadian Lumber 2003 unless otherwise specified;
- (b) The timber must be framed and bored before treating unless specified otherwise;

- (c) Treated wood products must be produced and installed in accordance with the CSA O80-08 series and the Western Wood Preservers Institute and Canadian Institute of Treated

Wood Best Management Practices for Treated Wood in Western Aquatic Environments, latest edition, (BMP);

- (d) The FWA must use Category UC 3.2, solid sawn products, exposed to weather, for timber not in ground contact, including decking, guard raisers, wharf guards, float upper splice blocks, float bull-rails, float rub boards, handrails, and handrail posts with no ground contact
  - The timber may be coated for aesthetics;
  - Products under the use of Category UC 3.2 must be treated in accordance with CSA O80
  - Required preservatives, retention, and penetration: ACZA, 4.0 kg/m<sup>3</sup> or CCA, 4.0kg/m<sup>3</sup>
  - Penetration of solid sawn products must be in accordance with CSA O80:
    - 10 mm and 90% of sapwood if material is less than 115 mm thick, or
    - 13 mm and 90% of sapwood if material is greater than or equal to 115 mm;
- (e) The FWA must use Category UC 4.1, for timber in contact with ground, freshwater, and/or salt water splash and solid sawn products must be treated in accordance with CSA O80 for products under use Category UC 4.1
  - Required preservatives, retention, and penetration: ACZA, 6.4 kg/m<sup>3</sup> or CCA, 6.4kg/m<sup>3</sup>
  - Penetration of solid sawn products must be in accordance with CSA O80:
    - 10 mm and 90% of sapwood if material is less than 115 mm thick, or
    - 13 mm and 90% of sapwood if material is greater than or equal to 115 mm thick;
- (f) The FWA must use Category UCSA, Marine (salt water exposure) for round wood piles, solid sawn products, and plywood, including piles, pile braces, pile whalers, bulkhead timbers, retaining wall materials, float cross ties, float flanges, lower and middle splice blocks for float flanges and stringers, and must be treated in accordance with CSA O80 for products under use Category UCSA
  - Required preservatives, retention, and penetration: ACZA, 30 kg/m<sup>3</sup> or CCA, 24 kg/m<sup>3</sup>
  - Penetration of solid sawn products in accordance with CSA O80:
    - 10 mm and 90% of sapwood if material is less than 115 mm thick, or
    - 13 mm and 90% of sapwood if material is greater than or equal to 115 mm thick

## 25. Steel

- (a) All small fastenings must be in accordance with CSA B111.
- (b) All drift bolts, machine bolts, washers and miscellaneous iron must be to CSA G40.21 and hot dip galvanized to CAN/CSA-G164.
- (c) All spikes and nails must be hot dip galvanized to CAN/CSA-G164 unless otherwise specified.
- (d) All other hardware must be galvanized: hot dip galvanized to CAN/CSA- G164 unless specified otherwise.
- (e) Items manufactured or fabricated from scrap steel of unknown chemical composition or physical properties are not acceptable.

- (f) All bolts must be machine bolts unless specified otherwise.  
Machine bolts must:
- (1) Conform to ASTM A307 unless specified otherwise; and
  - (2) Be provided with steel plate washers under the head and nut, unless specified otherwise.
- (g) All drift bolts must be unpointed with ragged edges beaten off.
- (h) All steel plate washers must be:
- Shape: round, unless specified to be square; and
  - Size: selected from the table below, unless specified otherwise:

WASHER DIMENSIONS			
Bolt Size	Thickness	Round Plate Outside Diameter	Square Plate Side Size
12.7 mm	5 mm	62 mm	62 mm
15.9 mm	6 mm	69 mm	69 mm
19.1 mm	6 mm	75 mm	75 mm
22.2 mm	8 mm	81 mm	81 mm
25.4 mm	9 mm	87 mm	87 mm
31.8mm	11mm	100 mm	100 mm
38.1mm	11mm	112 mm	112 mm

- (i) Bolt Holes
- (1) Machine bolts: bore holes must provide a driving fit; and
  - (2) Drift bolts: bore holes 1.5mm less than bolt diameter.
- (j) Welding:
- (1) Welding must be in accordance with CSA W59, unless specified otherwise; and
  - (2) The Contractor must provide evidence that welding companies are certified to CSA W47.1.
- (k) Steel Grade Requirements:
- (1) Channels and Angles: 350W; and
  - (2) Miscellaneous Plate: 300W.
- (l) Finish:  
All fabricated steel channels, angles and plates must be hot dipped galvanized unless otherwise noted.

26. Hardware

- (a) Bolts (drift, machine, carriage, lag, etc.) nuts and washers must be hot dip galvanized to CAN/CSA-G164.
- (b) Spikes and nails must be hot dip galvanized to CAN/CSA-G164 unless otherwise specified.
- (c) All other hardware specified to be galvanized must be hot dip galvanized to CAN/CSA-G164 unless otherwise specified.

27. Chain and Shackles

- (a) All chains and shackles must be to "Specification for Mooring Chain and Associated Fittings" (D-98-001-002/SF-001).
- (b) Mooring chains must be as a minimum, 51 mm stud link hardened mooring chain.
- (c) All shackles must be Grade 3, or better, D type joining or end shackles, must have an oval pin which is secured with a tapered pin and lead plug or an alternative if approved by any applicable amendment during the Solicitation.

28. Buoyancy Billets

- (a) Billets must be secured within the FWA.
- (b) All billets must be fabricated of polystyrene meeting the following properties:

REQUIRED POLYSTYRENE PROPERTIES	
Compressive strength at 10% deformation (minimum)	76 kPa
Flexural strength (minimum)	124 kPa
Water absorption by volume (maximum)	2.0%
Density (minimum)	16 kg/m <sup>3</sup>

- (c) Polystyrene, expanded must be of uniform cellular structure, free of voids. If a beaded product is used, beads must be fused so that, when the products is broken by hand pressure, there is an excess of broken or sheared beads.

29. Anodes

- (a) The FWA must have 152 mm OD and 25 mm thick zinc anodes.
- (b) The sacrificial (galvanic) anodes must be aluminum and conform to the following alloy composition:
  - (1) Copper 0.002%;
  - (2) Indium 0.015% to 0.04% Zinc 3.0% to 6.0%;
  - (3) Silicon 0.1% Remainder aluminum Shape: circular;
  - (4) Mounting: single central through bolt;
  - (5) Anti-seize compound for metallic contact surfaces compound must be Loctite # 242, or alternate approved by the Technical Authority.
- (c) A minimum of one anode must be installed for each mooring chain.
- (d) The Contractor must provide the Technical Authority with metallurgical ladle analysis certification of the anode material at least 7 calendar days before the delivery of the FWA. The anchor chain attachment points must indicate performance capabilities of the attachments points (i.e. maximum chain size and loading).

30. The FWA must be equipped with the specified appurtenances and services.

### C. Codes, Standards, Specifications, and Reference Material

1. The Contractor must adhere to the current editions of the following codes as a minimum:
  - (a) CSA A23.3;
  - (b) CSA A23.4;
  - (c) CSA S6 must be used to supplement CSA A23.3 and CSA A23.4 for durability requirements for structure in Marine Environments;
  - (d) Design Manual Pre-cast and Pre-stressed Concrete 4th Edition; and
  - (e) ACI 357.2R-10 and ACI 408.2-12.
  
2. The Contractor must adhere to the following reference materials:
  - (a) BS 6349 Standards:
    - (1) BS 6349 Maritime Structures Part 1 - General Criteria; and
    - (2) BS 6349 Maritime Structures Part 6 – Design of inshore moorings and floating structures;
  
  - (b) American Society for Testing and Materials (ASTM):
    - (1) ASTM A123/A123M-02, Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products;
    - (2) ASTM A252-98 (2002), Specification for Welded and Seamless Steel Pipe Piles; and
    - (3) ASTM A307-04, Specification for Carbon Steel Bolts and Studs, 410 MPa Tensile Strength;
  
  - (c) Canadian Coast Guard (CCG):  
MA 2080, General Specifications for Moorings for Aids to Navigation, Issue C (September 1999);
  
  - (d) Canadian Institute of Treated Wood. Western Wood Preservers Institute (CITW/WWPI):
    - (1) Best Management Practices for the Use of Treated Wood in Aquatic Environments (BMP), July 1996; and
    - (2) BMP Amendment #1, 17 April 2002;
  
  - (e) Canadian Standards Association (CSA):
    - (1) CSA B111-1974 (R 2003), Wire Nails, Spikes and Staples;
    - (2) CSA G40.21-04, Structural Quality Steels;
    - (3) CAN/CSA-G164-M92 (R2003), Hot Dip Galvanizing of Irregularly Shaped Articles;
    - (4) CAN3-O56-M79 (R2001), Round Wood Piles;
    - (5) CSA-O80 Series -08, Wood Preservation;
    - (6) CSA O121-M1978 (R2003), Douglas Fir Plywood;
    - (7) CAN/CSA-S16-01, Limit States Design of Steel Structures;
    - (8) CSA W47.1-03, Certification of Companies for Fusion Welding of Steel; and
    - (9) CSA W59-03, Welded Steel Construction (Metal Arc Welding);
  
  - (f) ASCE "Planning and Design Guidelines for Small Craft Harbors" – Third Edition – 2012;
  
  - (g) National Lumber Grades Authority (NLGA):  
Standard Grading Rules for Canadian Lumber, 2003 edition.

#### **D. Design Specialties**

The Contractor must utilize the services of the following design specialties as a minimum:

- (a) Marine structural engineering with knowledge and experience of reinforced and/or pre-stressed concrete design, including sizing floating breakwaters, calculation of lifting and handling stresses as well as stresses imposed by wind, currents, waves, vessels, ice and snow, seismic and live loads;
- (b) Hydro-technical engineering with knowledge and experience in determining design wave loads and sizing floating breakwaters and anchoring systems to meet both static and dynamic design wave conditions; and
- (c) Geotechnical engineering with knowledge and experience in defining anchor holding capacity and related geotechnical issues.

#### **E. Documentation Requirements**

- 1. The Contractor must submit to the Technical Authority 3 paper copies and 3 electronic copies (on CD, DVD, or USB stick) of all documentation required below.
- 2. The Contractor must submit to the Technical Authority a design report that includes the FWA's design and shop detail drawings which must include as a minimum:
  - (a) The design and drafting of reinforced and/or pre-stressed concrete;
  - (b) The buoyancy design to meet freeboard requirements;
  - (c) The design and detailing of the connection system for the floats under all loading including hogging and sagging waves; and
  - (d) The design and detailing of anchor attachment points, chain, and anchor mooring system.
- 3. The anchor chain attachment drawings must indicate performance capabilities of the attachments points (i.e. maximum chain size and loading).
- 4. The Contractor must submit all information and samples in accordance with Section I (Concrete Specifications).
- 4. All drawings and calculations must be reviewed for conformance of the general concept by the Technical Authority before the Contractor commences fabrication.
- 5. Design Calculations

The following design calculations must be performed and stamped by the Contractor's registered professional engineer and included with the design report submitted to the Technical Authority:

- (a) Anchorage attachment points to ensure that reactions are distributed appropriately and rationally throughout the system;
- (b) Overall system loads under full occupancy with consideration for shielding factors and deflections of the system and its effects on anchor loading; and
- (c) Vertical loading due to wave action and live and dynamic load requirements.

## 6. Drawings

The Contractor must submit to the Technical Authority the 30% and 90% drawings for review and the as-built, shop, and assembly drawings of the FWA at the end of the project.

- (a) The 30% drawings must be submitted in .dwg and .pdf electronic file formats and include:
  - (1) An indication of the field investigations completed and additional or revised recommendations if called for by the engineer;
  - (2) An indication of the horizontal and vertical control that will be used;
  - (3) A plan drawing indicating overall dimensions of major components;
  - (4) A generalized cross section indicating materials to be used and the floats location relative to maximum and minimum water levels to be encountered; and
  - (5) Title block, north arrow and scale.
- (b) The 90% drawings must be submitted in .dwg and .pdf electronic file formats and include:
  - (1) A site plan drawing with float and anchorage system;
  - (2) A plan drawing indicating overall dimensions and major components;
  - (3) A detailed cross section indicating materials to be used and the floats location relative to maximum and minimum water levels to be encountered;
  - (4) A profile of the float and anchor system; and
  - (5) Title block, north arrow and scale.
- (c) As-built drawings must follow the requirements of the 90% drawings and include any final revisions identified by the Contractor's engineer.

## 7. Engineer Stamps

The Contractor must submit provide certification that the FWA has been properly designed, constructed, and field reviewed to meet all contract requirements, applicable codes, and other applicable enactments and have the FWA drawings, calculations, and contract documents stamped by a qualified Professional Engineer registered or licensed within Canada who has direct related experience in the use and interpretation of standards, design guides and manuals for the design and construction of floating marine structures of this size and complexity.

## 8. Installation Manual

At least 14 calendar days prior to the delivery of the FWA, the Contractor must submit to the Technical Authority a manual identifying all of the installation steps, equipment, and guidelines required to complete the installation deployment of the FWA. The Contractor must also specify the location where the FWA should be installed within the area of Esquimalt Harbour in British Columbia, Canada identified in Section J to meet the required performance.

## 9. Operations and Maintenance Manual

The Contractor must submit to the Technical Authority a manual identifying the operations and maintenance requirements and procedures to keep the FWA in good working order and condition. Preventative maintenance measures must be clearly identified and detailed within this manual.

## 10. Inspection Manual

The Contractor must submit to the Technical Authority a manual identifying the procedures and any specialized equipment required to inspect the FWA and its moorings in the harbour. The manual must also include an inspection checklist.

11. Bill of Materials

The Contractor must submit to the Technical Authority a Bill of Materials for the FWA that includes the:

- (a) Original equipment manufacturer and/or brand name;
- (b) Product name;
- (c) Product model;
- (d) Product code and/or part number;
- (e) Product description; and
- (f) Specifications.

12. The Contractor must provide flotation unit supplier information as well as the fabrication schedule at least 1 week prior to the delivery of billets so that the Technical Authority can arrange their inspection.

13. Written Report

The Contractor must issue a written report for the FWA that demonstrates that the pad meets the requirements of Annex A. The report must be signed off by the Contractor representative and submitted to the Technical Authority.

14. Language

All submitted documentation, calculations, and drawings must be provided in English as a minimum.

**F. Project Management and Delivery**

1. The Contractor must design, fabricate, assemble, and deliver the FWA to soundly conceived and engineered detailed plans, the development of which are the sole responsibility of the Contractor provided that the FWA incorporates specified features and components so as to meet the requirements utilizing the best available and previously proven design, construction and testing methods to ensure that the completed deliverables conform to the intended design and all applicable terms of the Contract. Nothing in the Contract, including the design review processes and any inspections, tests, or acceptances by or on behalf of Canada, in any way diminish the responsibility of the Contractor or relieve the Contractor from such responsibility, to obtain, at its own expense and risk, all approvals, certifications, permits, licences, consents, authorizations, filings, replacements, exemptions, decisions and registrations including any and all Canadian Maritime Documents, Statutory Agency Certificates and the Classification Society Certificates required by law, including the Statutory Agency, the Classification Society, or any other regulatory authority applicable to any part of the Work.

2. Project Meetings

(a) Meeting Organization and Coordination

The Contractor must ensure that its data, personnel, and any applicable resources are available for the efficient conduct of each meeting. As appropriate, meetings may be held by telephone or at the Contractor's plant at the discretion of the Technical Authority. The Contractor's Project Manager or designated representative must be present at all meetings.

(b) Meeting Documentation

- (1) The Contractor must prepare and deliver a meeting agenda for all meetings to the Contracting Authority and Technical Authority.
- (2) The Contractor must record, prepare, and deliver the minutes of each meeting to the Contracting Authority and Technical Authority.
- (3) Absolutely no change in the interpretation of the requirements, cost, or schedule, as defined in the Contract, may be authorized either verbally or by the minutes of a meeting. Such action requires a formal Contract Amendment by the Contracting Authority.
- (4) The Contractor must formally submit to the Contracting Authority and Technical Authority all items that could have a contractual impact as they arise.

(c) Project Kick-off Meeting

The Contracting Authority will schedule the project kick-off meeting with the Contractor and Technical Authority to occur via a teleconference or online conference call no later than fourteen calendar days after contract award. The purpose of the meeting is to introduce the main project stakeholders and review and secure a common understanding of the requirements expressed in the Contract.

(d) Progress Review Meetings

Progress Review Meetings will be held with project stakeholders to discuss any issues or concerns as they arise with the contract. Any such meetings will be held via teleconference or online conference calls.

(e) Meetings at Contractor's Plant

At the Technical Authority's discretion, one or more additional meetings and/or inspections will be held at the Contractor's plant or on-site at a time to be determined by the Technical Authority during the fabrication phase of the FWA.

(f) Other Meetings

The Contractor or Technical Authority may schedule informal reviews, such as teleconference calls, online conference calls, briefings, and technical interchange meetings, as required to achieve the requirements of the Contract.

3. Schedule

- (a) The Contractor must work whatever shifts required to ensure the work meets regulatory windows and is completed by the end of the Contract.
- (b) The Contractor must notify the Contracting Authority and Technical Authority immediately whenever a variation from the schedule is expected to occur or when the submission of the deliverables will be delayed.

#### 4. Delivery

The Contractor must fabricate and assemble the FWA to the Contractor's design and integrate all of its components in an installation-ready FWA and deliver the FWA to the Esquimalt Harbour (British Columbia) location specified by the Technical Authority. The Contractor is responsible for all aspects of the delivery of the FWA required for the successful completion of all work under the Contract.

#### **G. Installation**

While the intent is to have the FWA installed within an area of Esquimalt Harbour identified in Section J by others using the installation manual provided by the Contractor, the services of the Contractor may be required to perform and/or assist with the installation of the FWA. Such installation services are included as options as per Article 7.1.1 of the resulting Contract.

Installation Service Options:

(a) Installation Assistance Services – Off-Site

The Contractor must provide telephone and e-mail support between 8:00am and 5:00pm (local time in Esquimalt Harbour) to provide technical assistance with the installation of the FWA.

(b) Installation Assistance Services – On-Site at Esquimalt Harbour

The Contractor must provide in-person support between 8:00am and 5:00pm (local time in Esquimalt Harbour) to provide on-site technical assistance with the installation of the FWA in Esquimalt Harbour.

(c) Installation Services

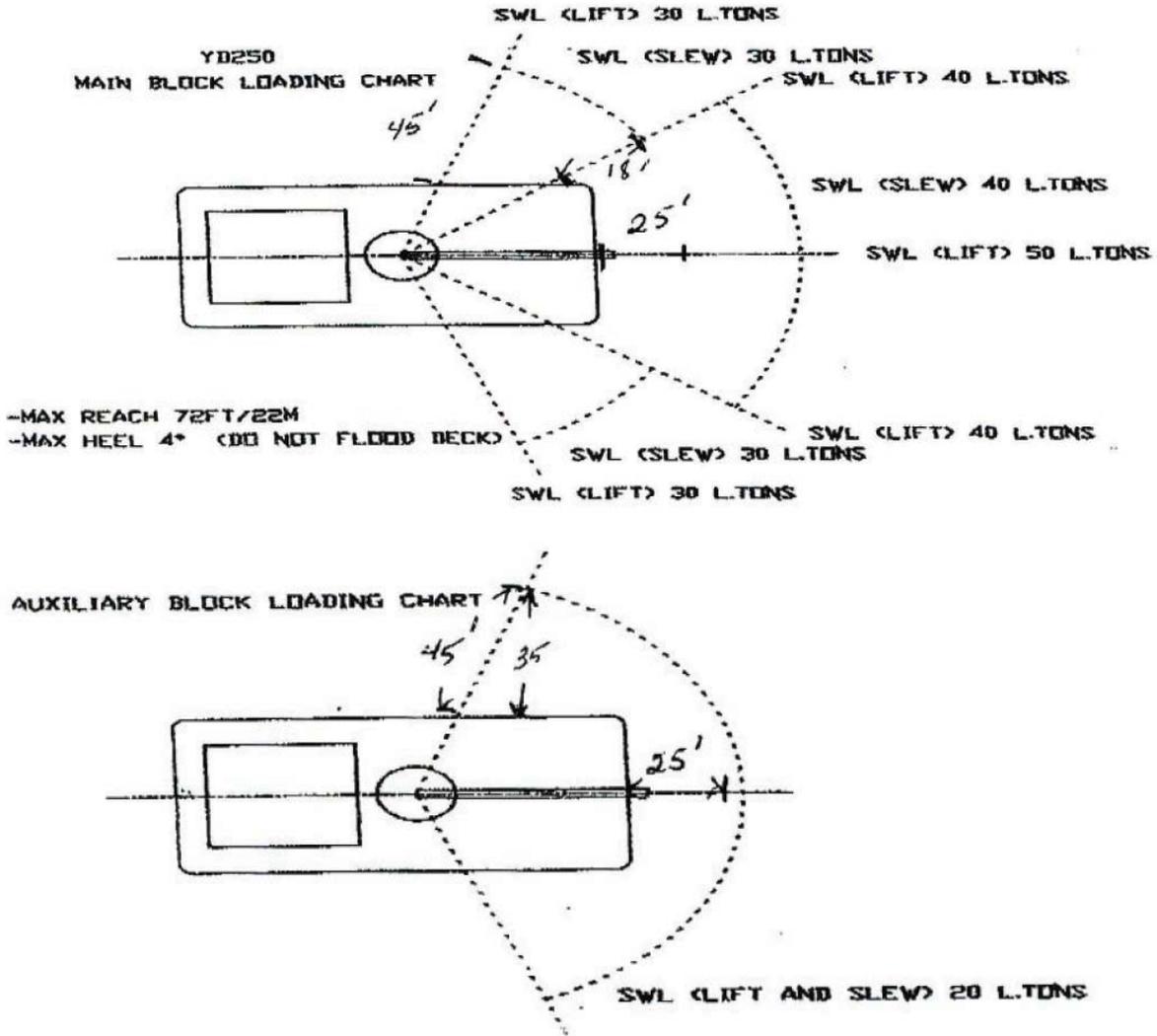
The Contractor must perform and complete the installation of the FWA within the area of Esquimalt Harbour identified in Section J to meet the required performance.

## H. Floating Crane Technical Data

The Department of National Defence currently utilizes the services of the illustrated YD 250 floating crane with a nominal crane capacity of 50 ton.



**YD 250 CRANE LIFTING LOAD CHART**  
**NOV 2007**



ENG SUPT 19 NOV 07

Both Hooks 45' above water  
 All lifting capacities are current

## **I. Concrete Specifications**

### **1. General**

#### **1.1 Measurement Procedures**

Measure the floating wave attenuator (FWA) supplied and delivered complete as lump sum (LS). The complete FWA consists of a concrete pontoon(s), mooring chains, seabed gravity anchors and appurtenances. There will be no fixed installation to the seabed.

#### **1.2 References**

##### **1.2.1 American Society for Testing and Materials International (ASTM)**

- .1 ASTM A185/A185M-05a, Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete.
- .2 ASTM A775/A775M-04a, Standard Specification for Epoxy-Coated Reinforcing Steel Bars.
- .3 ASTM C260-01, Standard Specification for Air-Entraining Admixtures for Concrete.
- .4 ASTM D412-98a (2002) e1, Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension.
- .5 ASTM D2240-05, Standard Test Method for Rubber Property - Durometer Hardness.

##### **1.2.2 Canadian General Standards Board (CGSB)**

- .1 CAN/CGSB-1.40-97, Anticorrosive Structural Steel Alkyd Primer.
- .2 CAN/CGSB-1.181-99, Ready Mixed Organic Zinc-Rich Coating.

##### **1.2.3 Canadian Standards Association (CSA international)**

- .1 CSA-A23.1/A23.2-2004, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
- .2 CSA-A23.3-04, Design of Concrete Structures.
- .3 CSA-A23.4-05, Precast Concrete - Materials and Construction.
- .4 CAN/CSA-A3000-03, Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).
- .5 CSA-A3001-03, Cementitious Materials for Use in Concrete.
- .6 CAN/CSA-G30 .18-M92(R2002), Billet-Steel Bars for Concrete Reinforcement.
- .7 CAN/CSA-G40.20/G40. 21-2004, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
- .8 CAN/CSA-G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
- .9 CAN/CSA-S6-2005, Canadian Highway Bridge Design Code.
- .10 CSA-W47.1-03, Certification of Companies for Fusion Welding for Steel.
- .11 CAN/CSA W48-01(R2006), Filler Metals and Allied Materials for Metal Arc Welding (Developed in co-operation with the Canadian Welding Bureau).
- .12 CSA-W59-03, Welded Steel Construction (Metal Arc Welding) (Metric version).
- .13 CSA-W186-M1990 (R2002), Welding of Reinforcing Bars in Reinforced Concrete Construction.

##### **1.2.4 The Master Painters Institute (MPI) • Architectural Painting Specification Manual (ASM) February 2004**

- .1 MPI # 18, Organic Zinc Rich Primer.
- .2 MPI # 23, Oil Alkyd Primer.

### 1.2.5 Underwriters' Laboratories of Canada (ULC)

- .1 CAN/ULC-S701-05, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.

### 1.2.6 Design Requirements

- .1 Design Concrete to CSA-A23.3 and CSA-A23.4 to carry handling stresses.
- .2 Design connections/attachments of elements to load/forces specified and as calculated.
- .3 Provide detailed calculations and design drawings for typical precast elements and connections.

### 1.2.7 Tolerances

- .1 Tolerance of elements to CSA-A23.4.
- .2 Length of elements not to vary from design length by more than plus or minus 30 mm (based on 24m float sections).
- .3 Cross sectional dimensions of elements not to vary from design dimensions by more than plus or minus 5 mm.
- .4 Deviations from straight lines not to exceed 12 mm in 10 m.
- .5 Elements not to vary by more than plus or minus 5 mm from true overall cross sectional shape as measured by difference in diagonal dimensions.
- .6 Minimum concrete cover of 50mm on exterior surfaces, and minimum cover of 30mm on interior surfaces.

### 1.2.8 Action and Information Submittals

- .1 Submit shop drawings in accordance with CSA-A23.4 and include following items:
  - Design calculations for items designed by manufacturer
  - Details of pre-stressed and non-pre-stressed members, reinforcement and their connections.
  - Camber.
  - Finishing schedules.
  - Methods of handling and erection.
  - Openings, sleeves, inserts and related reinforcement.
- .2 Submit 3 full size copies of design drawings for typical elements and connections for review by the Technical Authority, **3 weeks prior to manufacture**.
- .3 Shop Drawings: submit drawings stamped and signed by qualified professional engineer registered or licensed with Canada.
- .4 Submit sample and sample number of each finish to be used on project to the Technical Authority.

### 1.2.9 Quality Assurance

- .1 Quality Control Plan: Submit a written report to the Technical Authority verifying compliance that the concrete provided meets performance requirements of concrete.

### 1.2.10 Qualifications

- .1 Fabricated and erect concrete by manufacturing procedures in accordance to CSA-A23.4.
- .2 Concrete manufacturer must prepare documentation showing products produced and erected are in accordance with CSA-A23.4 procedures and standards for quality control and assurance purposes. The Contractor must provide this documentation to the Technical Authority.
- .3 Welding companies certified to CSA-W47.1.

### 1.2.11 Warranty

Contractor warrants but for 2 years, that concrete will not spall or show visible evidence of corrosion of embedded steel and cracking that is detrimental to structural integrity of the float as assessed by an Engineer. Contractor must warrant that proper water pond curing of seven days for C-XL exposure class in accordance with the General Conditions.

## 2. Products

### 2.1 Materials

- .1 Cement: to CAN/CSA-A3001, Type GU.
- .2 Supplementary cementing materials: with 10-15% Type F fly ash replacement and 8% min. Type SF Silica Fume, by mass of total cementitious materials to CAN/CSA A3001. Total supplementary cementing materials not to exceed 18% by mass of total cementitious material.
- .3 Water: to CSA-A23.1/A23. 2.
- .4 Reinforcing steel: to CAN/CSA-G30 .18, bare or galvanized bars with silica fume. Pre-stressing steel tendons and bars: to CAN/CSA-S6.
- .5 Welded wire fabric: to ASTM A185/A185M, coated (no epoxy). Hardware and miscellaneous materials: to CSA-A23.1/A23.2. Forms: to CSA-A23.4.
- .6 Anchors and supports: to CAN/CSA-G40 .21 Type 300 W, galvanized after fabrication. Welding materials: to CSA W48.
- .7 Welding electrodes: to CSA W48, certified by Canadian Welding Bureau. Galvanizing: hot dipped galvanizing with minimum zinc coating of (610) g/m<sup>2</sup> to CAN/CSA-G164.
- .8 Steel primer: to CAN/CGSB-1.40.
- .9 Zinc-rich primer: to CAN/CGSB-1 .181.
- .10 Post-tensioning ducts: to CSA-A23.1/A23.2.
- .11 Air entrainment admixtures: to ASTM C260.
- .12 Shims: plastic.
- .13 Weep-hole tubes: purpose made plastic.

### 2.2 Mixes (Concrete)

#### General

Performance Method for specifying concrete to meet performance criteria in accordance with CAN/CSA-A23.1/A23. 2.

- .1 Ensure concrete supplier meets performance criteria as established below.
- .2 Provide concrete mix to meet following hard state requirements:
  - Durability and class of exposure: C-XL
  - Minimum compressive strength at 56 days: 40 MPa
  - Intended application: continuous water submersion and splash zone (frequent wetting and drying cycles)
  - Volume stability: acceptable strain range due to shrinkage, creep and freeze thaw cycle is between 0.0002 and 0.0005
  - Surface texture: non-skid finish on top, steel trowel or steel form finish on sides and bottom of floats
  - Geometrical requirements: 1.5 % slope for drainage
  - Provide quality management plan to ensure verification of concrete quality to specified performance, include concrete supplier's certification
  - Placement of deck and walls in one pour to allow concrete to shrink wrap onto foam and keel
  - Foam must be secured to keel to prevent foam displacement

- Water pond cure for 7 days to prevent short and long term cracking

### **2.3 Manufacturing**

- .1 Manufacture concrete in accordance with CSA-A23.4.
- .2 Mark each unit to correspond to identification mark on shop drawings for location with date cast on part of unit not to be exposed.
- .3 Provide hardware suitable for handling elements.
- .4 Design tendons and anchorages and install post tensioning ducts in accordance with CSA-A23 .3 and CAN/CSA-56.
- .5 Galvanize anchors and steel embedments after fabrication and touch up with zinc-rich primer (Zings) after welding.

### **2.4 Finishes**

- .1 Finish units to standard grade to CSA-A23.4.

### **2.5 Source Quality Control**

- .1 Provide the Technical Authority with certified copies of quality control tests related to this project as specified in CSA-A23.4 and CSA-G279.
- .2 Inspect pre-stressed concrete tendons in accordance with CSA-G279.
- .3 Provide records from in-house quality control program based upon plant certification requirements to the Technical Authority for inspection and review.
- .4 Upon request, provide the Technical Authority with certified copy of mill test report of reinforcing steel supplied, showing physical and chemical analysis.
- .5 Cast plants should keep complete records of supply source of concrete material, steel reinforcement, pre-stressing steel and provide to the Technical Authority for review upon request.

**J. Wave Climate Study**

**\*\*\* Available upon request from the Contracting Authority \*\*\***

**K. Specification for Mooring Chain and Associated Fittings (D-98-001-002/SF-001)**

**\*\*\* Available upon request from the Contracting Authority \*\*\***

## **L. INSPECTION/QUALITY ASSURANCE/QUALITY CONTROL**

### **L-1 Inspection and Test Plan (ITP):**

1. The Contractor must prepare an Inspection and Test Plan (ITP) comprising individual inspection and test plans for each specification item of this project, in accordance with the Quality Standard and their Quality Control Plan. The ITP must be submitted to the Technical Authority (TA) for review and amended by the Contractor to the satisfaction of the TA.
  - a. Each ITP must contain all inspection points identified in the specification, or in the Manufacturer's Instructions, highlighting points that must be witnessed by the TA and other "hold" points imposed by the Contractor to ensure the quality of the work.
  - b. Milestone delivery date for the ITP is given in the Contract, however individual ITPs should be forwarded for review as developed.
2. Inspection and Test Plan Criteria:  
Inspection criteria, procedures and requirements are stated in the specifications, drawings, technical orders and reference standards invoked by the Specifications. Test and trial documentation is also included or referenced in the Specification. An individual Inspection and Test Plan (ITP) is required for each Specification item.

All ITPs must be prepared by the Contractor in accordance with the above criteria, their Quality Plan, and must provide the following reference information:

- a. the Specification item number;
  - b. equipment/system description and a statement defining the parameter which is being inspected;
  - c. a list of applicable documents referenced or specified in the inspection procedure;
  - d. the inspection, test or trial requirements specified in the Specification;
  - e. the tools and equipment required to accomplish the inspection;
  - f. the environmental conditions under which the inspections are to be conducted and the tolerances on the inspection conditions;
  - g. a detailed step-by step procedure of how each inspection is to be performed, conformance parameters, accept/reject criteria and recording of results, deficiencies found and description of corrective action(s) required;
  - h. name and signature of the person who prepared the plan, date prepared and amendment level; and,
  - i. names and signatures of the persons conducting and witnessing the inspection, test or trial.
3. Contractor Imposed Testing:  
Tests and trials in addition to those given in the Specification must be approved by the TA.
  4. Amendments:  
Amendment action for the Inspection and Test Plans must be ongoing throughout the Work and reflect the inspection requirements for unscheduled work. Amendments must be submitted as developed, but not less frequently than once every second week.

### **L-2 Conduct of Inspection**

1. Inspections must be conducted in accordance with the ITP as approved by the TA.
2. The Contractor must provide their own staff or subcontracted staff to conduct inspections, tests and trials; excepting that Field Service Representative (FSR), TA or Designated Engineering Authority (DEA) personnel may be designated in the specifications, in which case the Contractor must ensure that their own staff is provided in support of such inspection/test/trial.
3. The Contractor must ensure that the required conditions stated in the ITP prevail at the commencement of, and for the duration of, each inspection/test/trial.

4. 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.
5. 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.

### **L-3 Inspection Records and Reports**

1. 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 consistent with the Quality Standard and their Quality Plan for this project.
2. The Contractor's 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 TA.
3. 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 TA. Representatives of Canada may assist in identification where appropriate.
4. Corrective action to remove cause of unsatisfactory inspections must be submitted to the TA in writing by the Contractor, for approval prior to affecting such repairs and rescheduling of the unsatisfactory inspection/test/trial.
5. 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 their own risk.
6. The Contractor must reschedule unsatisfactory inspections after any required repairs have been completed.
7. 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 TA upon request.

**ANNEX B - BASIS OF PAYMENT**

*Remark to Bidder: Annex B will form the Basis of Payment for the resulting contract and should not be filled in at the bid submission stage.*

**1. Contract Price**

<b>a.</b>	<p><b>Known Work</b> For work as stated in Part 7 Article 1, as specified in Annex A and as detailed on the Pricing Data Sheet,</p> <p style="text-align: right;">For a FIRM PRICE of:</p>	
<b>b.</b>	<p><b>Cost of the Contract Financial Security</b></p>	
<b>c.</b>	<p><b>Contract Price</b> Applicable Taxes Excluded</p> <p style="text-align: right;">For a FIRM PRICE of:</p>	

**2. 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:

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, plus Applicable Taxes, calculated on total cost of material and labour.

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.

**2.1** 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 2.2, will not be negotiated, but will be compensated for in accordance with 2.2.

**2.2** 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 will be included as *Overhead* for the purposes of determining the *Charge-out Labour Rate* set out in clause 2.

2.3 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.

### 3. Overtime

3.1 The Contractor must not perform any overtime under the Contract unless authorized in advance and in writing by the Contracting Authority. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing the details of the overtime performed pursuant to the written authorization.

Payment for authorized overtime will be calculated as follows:

a. For known work, the Contractor will be paid the Contract Price plus authorized overtime hours paid at the following premium rates:

For time and one half: \$\_\_\_\_\_ per hour, or

For double time: \$\_\_\_\_\_ per hour.

b. For unscheduled work, the Contractor will be paid the authorized overtime hours at the quoted charge-out labour rate, plus the following premium rates:

For time and one half: \$\_\_\_\_\_ per hour, or

For double time: \$\_\_\_\_\_ per hour.

3.2 The above premiums will be calculated by taking the average hourly direct labour rate premiums, plus certified fringe benefit, plus profit of 7.5 percent on labour premium and fringe benefits. These rates will remain firm for the duration of the Contract, including all amendments and are subject to audit if considered necessary by Canada.

### 4. Optional Goods and/or Services

(a) Installation Assistance Services – Off-Site:  
\_\_\_\_\_ \$ per hour.

(b) Installation Assistance Services – On-Site at Esquimalt Harbour  
\_\_\_\_\_ \$ for the first day  
\_\_\_\_\_ \$ for each subsequent day.

(c) Installation Services  
\_\_\_\_\_ \$ for the first day  
\_\_\_\_\_ \$ for each subsequent day.

## ANNEX C - INSURANCE REQUIREMENTS

### 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. Sudden and Accidental Pollution Liability (minimum 120 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.
  - n. 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.

## **2. Errors and Omissions Liability Insurance**

1. The Contractor must obtain Errors and Omissions Liability (a.k.a. Professional 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 \$1,000,000 per loss and in the annual aggregate, inclusive of defence costs.
2. 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.
3. The following endorsement must be included:  
Notice of Cancellation: The Insurer will endeavour to provide the Contracting Authority thirty (30) days written notice of cancellation.

## ANNEX D - FINANCIAL BID PRESENTATION SHEET

<b>1.</b>	<b>INSTRUCTIONS TO BIDDERS</b>
<p>The Bidders will be evaluated on the aggregate of the Totals for the Known Work and the Additional Work. These totals are calculated in the Appendix 1 to Annex D, Pricing Data Sheet, which is available upon request of the Contracting Authority.</p>	

### 2. Evaluation of Price

The price of the bid will be evaluated in Canadian Dollars, the Goods and Services Tax or the Harmonized Sales Tax excluded and Canadian customs duties and excise taxes included.

Bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The nominal noon exchange rate given by the Bank of Canada (<http://www.bankofcanada.ca/rates/exchange/10-year-converter/>) in effect on the solicitation closing date will be applied as a conversion factor to the bids submitted in foreign currency.

<b>a.</b>	<b>Known Work</b> For work as specified in Annex A and detailed in the Pricing Data Sheet - Appendix 1 to Annex D for a FIRM PRICE of:	\$ _____
<b>b.</b>	<b>Additional Work</b> <i>As specified in the Pricing Data Sheet – Appendix 1 to Annex D.</i>  <i>Note this price is for the purposes of evaluation only.</i>	\$ _____
<b>c.</b>	<b>Contract Financial Security</b>  The total cost for the required Contract Financial Security:	\$ _____
<b>d.</b>	<b>EVALUATION PRICE</b> Applicable Taxes Excluded, [a + b + c]: For an EVALUATION PRICE of :	\$ _____

### 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's 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.

- 2.1 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 clause 2.2 will not be negotiated, but will be compensated for in accordance with clause 2.2 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.

**2.2** 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 will be included as *Overhead* for the purposes of determining the *Charge-out Labour Rate* entered in line 1.b. above.

**2.3** 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. A separate labour component for the purchase and handling of materials or subcontract administration is not allowable.

### **3. Overtime**

**3.1** The Contractor must not perform any overtime under the Contract unless authorized in advance and in writing by the Contracting Authority. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing the details of the overtime performed pursuant to the written authorization.

Payment for authorized overtime will be calculated as follows:

a. For known work, the Contractor will be paid the Contract Price plus authorized overtime hours paid at the following premium rates:

For time and one half: \$ \_\_\_\_\_ per hour, or

For double time: \$ \_\_\_\_\_ per hour.

b. For unscheduled work, the Contractor will be paid the authorized overtime hours at the quoted charge-out labour rate, plus the following premium rates:

For time and one half: \$ \_\_\_\_\_ per hour, or

For double time: \$ \_\_\_\_\_ per hour.

**3.2** The above premiums will be calculated by taking the average hourly direct labour rate premiums, plus certified fringe benefit, plus profit of 7.5 percent on labour premium and fringe benefits. These rates will remain firm for the duration of the Contract, including all amendments and are subject to audit if considered necessary by Canada.

### **4. Optional Goods and/or Services**

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Section 6 of 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.

a. Installation Assistance Services – Off-Site:  
\$ \_\_\_\_\_ per hour.

b. Installation Assistance Services – On-Site at Esquimalt Harbour:  
\$ \_\_\_\_\_ for the first day; and  
\$ \_\_\_\_\_ for each subsequent day.

c. Installation Services:  
\$ \_\_\_\_\_ for the first day; and  
\$ \_\_\_\_\_ for each subsequent day.

## ANNEX E - TECHNICAL BID EVALUATION

Bidders should provide with their technical bid, a page reference indicating clearly where the substantial information for each criterion identified below can be found.

### A. Mandatory Technical Evaluation Criteria

To be considered responsive, a bid must meet all of the following mandatory technical evaluation criteria by providing substantial information describing completely and in detail how the criterion is met or addressed. Bids not meeting all of the mandatory technical evaluation criteria will be given no further consideration.

For the following mandatory technical evaluation criteria, a similar project is considered to be the design and fabrication of a floating wave attenuator (FWA) in excess of 50 meters in length with performance criteria in ocean conditions and primarily consisting of concrete.

1. The bid must demonstrate the bidder's company has designed and fabricated at least 1 similar project to its completion since August 1, 2005.
2. The bid must demonstrate the bidder's company has at least 36 months' experience in designing and fabricating similar projects to their completion since August 1, 2005.
3. The Bidder must take advantage of existing floating wave attenuator / breakwater designs, known existing performance characteristics, known fabrication techniques and known installation techniques if awarded the resulting Contract. These may include proprietary floating wave attenuator / breakwater designs. The resulting Contractor may custom design the FWA as long as it stems from a pre-existing product line. The bid must demonstrate that the Bidder has a proven floating wave attenuator / breakwater product line of similar nature to the Requirement.
4. The bid must include a technical description of the Bidder's proposed work and concept design drawings of the proposed FWA which demonstrate the Bidder's understanding of the Requirement.

### B. Point Rated Technical Evaluation Criteria

For the following point rated technical evaluation criteria, a similar project is considered to be the design and fabrication of a FWA of at least 92 meters in length and primarily consisting of concrete.

1. The bid demonstrates the Bidder's company experience in designing and fabricating multiple similar projects since August 1, 2005.

Point Allocation:

- 10 Demonstrated 2 completed projects meeting the criterion.
  - 20 Demonstrated 3 completed projects meeting the criterion.
  - 50 Demonstrated 4 completed projects meeting the criterion.
  - 75 Demonstrated 5 completed projects meeting the criterion.
  - 100 Demonstrated 6 or more completed projects meeting the criterion.
- (Maximum: 100 points)

2. The bid demonstrates the Bidder's company experience in designing and fabricating similar projects since August 1, 2005.

Point Allocation:

- 10 Demonstrated between 37 and 48 months' experience meeting the criterion.
- 20 Demonstrated between 49 and 72 months' experience meeting the criterion.
- 30 Demonstrated between 73 and 96 months' experience meeting the criterion.
- 40 Demonstrated more than 97 months' experience meeting the criterion.

(Maximum: 40 points)

3. The bid demonstrates the Bidder's company experience overseeing and coordinating the physical delivery and the installation of similar projects in a saltwater environment.

Point Allocation:

- 0 Evaluated as not meeting the criterion.
- 2 Demonstrated 1 completed project meeting the criterion.
- 5 Demonstrated 2 completed projects meeting the criterion.
- 10 Demonstrated 3 completed projects meeting the criterion.
- 20 Demonstrated 4 or more completed projects meeting the criterion.

(Maximum: 20 points)

4. The bid describes the Bidder's methodology to ensure the delivery of the FWA to Esquimalt Harbour is safe and free of damage. The bid should include photos from previous delivery or drawings of the proposed methodology to supplement the description of the delivery methodology.

Point Allocation:

- 0 Fails to address the criterion in a satisfactory manner.
- 5 Addresses the criterion but with limited detail and generates significant questions.
- 15 Provides relevant information in most areas but lacks detail or generates some questions.
- 25 Completely addresses all components logically and provides significant and adequate detail.

(Maximum: 25 points)

5. The bid demonstrates the experience of the Bidder's engineer who will be stamping the documentation as per Annex A.

Point Allocation:

- 0 Insufficient details were provided.
- 5 The engineer is a qualified Professional Engineer registered or licensed within Canada who has direct related experience in the use and interpretation of standards, design guides and manuals for the design and construction of 2 floating marine structures of this size and complexity since August 1, 2003.
- 10 The engineer is a qualified Professional Engineer registered or licensed within Canada who has direct related experience in the use and interpretation of standards, design guides and manuals for the design and construction of 3 floating marine structures of this size and complexity since August 1, 2003.
- 15 The engineer is a qualified Professional Engineer registered or licensed within Canada who has direct related experience in the use and interpretation of standards, design guides and manuals for the design and construction of 4 or more floating marine structures of this size and complexity since August 1, 2003.

(Maximum: 15 points)

## ANNEX A to PART 5 - BID SOLICITATION

### FEDERAL CONTRACTORS PROGRAM FOR EMPLOYMENT EQUITY – CERTIFICATION

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit [Employment and Social Development Canada \(ESDC\) – Labour's](#) website.

Date: \_\_\_\_\_ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

#### Complete both A and B.

A. Check only one of the following:

- A1. The Bidder certifies having no work force in Canada.
- A2. The Bidder certifies being a public sector employer.
- A3. The Bidder certifies being a [federally regulated employer](#) being subject to the [Employment Equity Act](#).
- A4. The Bidder certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).

A5. The Bidder has a combined workforce in Canada of 100 or more employees; and

- A5.1. The Bidder certifies already having a valid and current [Agreement to Implement Employment Equity](#) (AIEE) in place with ESDC-Labour.

OR

- A5.2. The Bidder certifies having submitted the [Agreement to Implement Employment Equity \(LAB1168\)](#) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- B1. The Bidder is not a Joint Venture.

OR

- B2. The Bidder is a Joint venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions)