



**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
**Bid Receiving Public Works and Government  
Services Canada/Réception des soumissions  
Travaux publics et Services gouvernementaux  
Canada**  
800 Burrard Street, Room 219  
800, rue Burrard, pièce 219  
Vancouver, B.C.  
Vancouver  
British Columbia  
V6Z 0B9  
Bid Fax: (604) 775-9381

**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> Tech. Consultant - WWTP Upgrade	
<b>Solicitation No. - N° de l'invitation</b> EZ899-161301/A	<b>Date</b> 2015-11-19
<b>Client Reference No. - N° de référence du client</b>	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$TPV-028-7664	
<b>File No. - N° de dossier</b> TPV-5-38268 (028)	<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 2016-01-07</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Pacific Standard Time PST
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Lam(TPV), Tian	<b>Buyer Id - Id de l'acheteur</b> tpv028
<b>Telephone No. - N° de téléphone</b> (604) 775-9382 ( )	<b>FAX No. - N° de FAX</b> (604) 775-6633
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> CSC - Mountain and Kent Institutions - Various, BC	

**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  
800 Burrard Street, Room 219  
800, rue Burrard, pièce 219  
Vancouver, B.C.  
V6Z 0B9  
British C

<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</b> <b>(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>



Destination Code - Code destinataire	Destination Address - Adresse de la destination	Invoice Code - Code bur.-comptable	Invoice Address - Adresse de facturation
D-1	CSC - Mountain and Kent Institutions - Various, BC	EZ899	DEPARTMENT OF PUBLIC WORKS AND GOVERNMENT SERV 219-800 BARRARD ST VANCOUVER British Columbia V6Z0B9 Canada



Item Article	Description	Dest. Code Dest.	Inv. Code Fact.	Qty Qté	U. of I. U. de D.	Destination	Unit Price/Prix unitaire FOB/FAM	Plant/Usine	Del. Offered Liv. offerte
1	Tech. Consultant - WWTP Upgrade Tech. Consultant - WWTP Upgrade	D - 1	EZ899	1	Each	\$	XXXXXXXXXXXX		See Herein

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## **REQUEST FOR PROPOSAL (RFP)**

**(One Phase Procedure)**

**Technical Consultant - Wastewater Treatment Plant Upgrade  
Mountain and Kent Institutions  
Agassiz, BC**

**Project number: R.067583.001**

**For information:  
Tian Lam  
Supply Specialist  
Email: [tian.lam@pwgsc-tpsgc.gc.ca](mailto:tian.lam@pwgsc-tpsgc.gc.ca)**

**Public Works and Government Services Canada**

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## **TABLE OF CONTENTS**

The following is intended to clarify the general structure of the whole document.

Front Page

Supplementary Instructions to Proponents (SI)

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- SI6 Web Sites

Terms, Conditions and Clauses

- Agreement
- Agreement Particulars

Team Identification Format (Appendix A)

Declaration/Certifications Form (Appendix B)

Price Proposal Form (Appendix C)

Doing Business with PWGSC – Pacific Region (Appendix D)

Submission Requirements and Evaluation (SRE) (Appendix E)

Project Brief / Terms of Reference (Appendix F)

- Description of Project (PD)
  - Description of Services - Required Services (PA and RS)
-

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### **Optional Site Visit**

Bidders are strongly recommended to visit the site prior to submitting a tender for this work and to make inquiries or investigations necessary to become thoroughly acquainted with the site as well as the nature and extent of the work.

A site visit will be held on the following date and time:

Date: December 15, 2015

Time: 10:00 a.m PST

Address: PWGSC Site Office  
Kent Institution  
4732 Cemetery Road  
Agassiz, BC V0M 1A0

Location: Bidders are to meet at the PWGSC site office, adjacent to the Kent Institution and the Waste Water Treatment Plant in Agassiz, BC.

Instructions: Interested bidders are required to provide their name(s) to Tian Lam at [tian.lam@pwgsc-tpsgc.gc.ca](mailto:tian.lam@pwgsc-tpsgc.gc.ca) no later than 24 hours prior to the site visit to confirm attendance and provide the name(s) of the person(s) who will attend. Bidders may be requested to sign an attendance form.

Any clarifications or changes to the bid solicitation resulting from the site visit will be included as an amendment to the bid solicitation.

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## SUPPLEMENTARY INSTRUCTIONS TO PROPONENTS (SI)

### SI1 INTRODUCTION

1. Public Works and Government Services Canada (PWGSC) intends to retain an individual consulting firm or joint venture to provide the professional services for the project as set out in this Request for Proposal (RFP).
2. This is a single phase selection process. The nature of the requirement and the anticipated limited number of response by the industry leads PWGSC to believe that this approach will not unduly force a large number of firms to expend an overall unreasonable amount of effort in response to PWGSC.
3. Proponents responding to this RFP are requested to submit a full and complete proposal. The proposal will cover not only the qualifications, experience and organization of the proposed Consultant Team, but also the detailed approach to the work, and the pricing and terms offered. A combination of the technical and price of services submissions will constitute the proposal.

### SI2 PROPOSAL DOCUMENTS

1. All instructions, general terms, conditions and clauses identified in the RFP by number, date and title, are hereby incorporated by reference into and form part of this solicitation and any resultant contract.

All instructions, general terms, conditions and clauses identified in the RFP 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.

2. The following are the proposal documents:
    - (a) Supplementary Instructions to Proponents (SI);  
R1410T (2015-07-03), General Instructions (GI) – Architectural and/or Engineering Services – Request for Proposal;  
Submission Requirements and Evaluation (SRE);
    - (b) the general terms, conditions and clauses, as amended, identified in the Agreement clause;
-

- (c) Project Brief / Terms of Reference;
  - (d) the document entitled "Doing Business with PWGSC – Pacific Region";
  - (f) any amendment to the solicitation document issued prior to the date set for receipt of proposals; and
  - (g) the proposal, Declaration/Certifications Form and Price Proposal Form.
3. Submission of a proposal constitutes acknowledgment that the Proponent has read and agrees to be bound by these documents.

### **SI3 QUESTIONS OR REQUEST FOR CLARIFICATION**

Questions or requests for clarification during the solicitation period must be submitted in writing to the Contracting Authority named on the RFP - Page 1 as early as possible. Enquiries should be received no later than five (5) working days prior to the closing date identified on the front page of the Request for Proposal. Enquiries received after that date may not be answered prior to the closing date of the solicitation.

### **SI4 CANADA'S TRADE AGREEMENTS**

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

### **SI5 CERTIFICATIONS**

#### **1. Integrity Provisions – Declaration of Convicted Offences**

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

#### **2. Federal Contractors Program for Employment Equity - Proposal Certification**

By submitting a proposal, the Proponent certifies that the Proponent, and any of the Proponent's members if the Proponent is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list

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

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available from Employment and Social Development Canada (ESDC) - Labour's website.

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

## **SI6 WEBSITES**

The connection to some of the Web sites in the RFP is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Employment Equity Act

<http://laws-lois.justice.gc.ca/eng/acts/E-5.401/index.html>

Federal Contractors Program (FCP)

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

Certificate of Commitment to Implement Employment Equity form LAB 1168

<http://www.servicecanada.gc.ca/cgi-bin/search/eforms/index.cgi?app=profile&form=lab1168&dept=sc&lang=e>

Code of Conduct for Procurement

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

Lobbying Act

<http://laws-lois.justice.gc.ca/eng/acts/L-12.4/?noCookie>

Contracts Canada

<https://buyandsell.gc.ca/>

Supplier Registration Information

<https://srisupplier.contractsCanada.gc.ca>

Consultant Performance Evaluation Report Form

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913-1.pdf>

Canadian economic sanctions

<http://www.international.gc.ca/sanctions/index.aspx?lang=eng>

National Joint Council (NJC) Travel Directive

<http://www.njc-cnm.gc.ca/directive/travel-voyage/index-eng.php>

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## TERMS, CONDITIONS AND CLAUSES

### AGREEMENT

1. The Consultant understands and agrees that upon acceptance of the offer by Canada, a binding Agreement shall be formed between Canada and the Consultant and the documents forming the Agreement shall be the following:
  - (a) the Front Page and this Agreement clause;
  - (b) the General Terms, Conditions and Clauses, as amended, identified as:
    - R1210D (2015-07-09), General Condition (GC) 1 - General Provisions – Architectural and/or Engineering Services
    - R1215D (2014-06-26), General Condition (GC) 2 - Administration of the Contract
    - R1220D (2015-02-25), General Condition (GC) 3 - Consultant Services
    - R1225D (2015-04-01), General Condition (GC) 4 - Intellectual Property
    - R1230D (2015-02-25), General Condition (GC) 5 - Terms of Payment
    - R1235D (2011-05-16), General Condition (GC) 6 - Changes
    - R1240D (2011-05-16), General Condition (GC) 7 - Taking the Services Out of the Consultant's Hands, Suspension or Termination
    - R1245D (2012-07-16), General Condition (GC) 8 - Dispute Resolution
    - R1250D (2015-02-25) R1650D (2015-02-25), General Condition (GC) 9 - Indemnification and InsuranceSupplementary Conditions  
Agreement Particulars
  - (c) Project Brief / Terms of Reference;
  - (d) the document entitled "Doing Business with A&ES";
  - (e) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
  - (f) the proposal, the Declaration/Certifications Form and the Price Proposal Form.
  
2. The documents identified above by title, number and date are hereby incorporated by reference into and form part of this Agreement, as though expressly set out herein, subject to any other express terms and conditions herein contained.

The documents identified above by title, number and date are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

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3. If there is a discrepancy between the wording of any documents that appear on the following 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) any amendment or variation in the Agreement that is made in accordance with the terms and conditions of the Agreement;
  - (b) any amendment to the solicitation document incorporated in the Agreement before the date of the Agreement;
  - (c) this Agreement clause;
  - (d) Supplementary Conditions;
  - (e) General Terms, Conditions and Clauses;
  - (f) Agreement Particulars;
  - (g) Project Brief / Terms of Reference;
  - (h) the document entitled "Doing Business with PWGSC – Pacific Region";
  - (i) the proposal.

### **AGREEMENT PARTICULARS**

The Agreement Particulars will be issued at time of award of contract and will identify the fee to be paid to the Consultant for the services determined in the Price Proposal Form.

### **PERIOD OF CONTRACT**

The period of the Contract is 52 months from date of contract award.

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## APPENDIX A - TEAM IDENTIFICATION FORMAT

For details on this format, please see SRE in the Request For Proposal.

The prime consultant and other members of the Consultant Team shall be, or eligible to be, licensed, certified or otherwise authorized to provide the necessary professional services to the full extent that may be required by provincial or territorial law.

### I. Prime Consultant (Proponent – Engineer):

Firm or Joint Venture Name: .....

.....

.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

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### II. Key Sub Consultants / Specialists:

#### Structural Engineer

Firm Name: .....

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Key Individuals and provincial professional licensing status and/or professional accreditation:

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#### Civil Engineer

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Firm Name: .....  
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.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

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**Architectural**

Firm Name: .....  
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.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

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**Wastewater Treatment Process Engineer**

Firm Name: .....  
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Key Individuals and provincial professional licensing status and/or professional accreditation:

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**Electrical Engineer**

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Firm Name: .....  
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.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

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**Code Analyst**

Firm Name: .....  
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Key Individuals and provincial professional licensing status and/or professional accreditation:

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**Mechanical Engineer**

Firm Name: .....  
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Key Individuals and provincial professional licensing status and/or professional accreditation:

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### **Programming, Instrumentation and Controls Engineer**

Firm Name: .....  
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.....

Key Individuals and provincial professional licensing status and/or professional accreditation:

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### **Geotechnical Engineer**

Firm Name: .....  
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Key Individuals and provincial professional licensing status and/or professional accreditation:

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### **Fire Protection**

Firm Name: .....  
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Key Individuals and provincial professional licensing status and/or professional accreditation:

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### **Commissioning**

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Firm Name: .....  
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Key Individuals and provincial professional licensing status and/or professional accreditation:

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### Operations and Training

Firm Name: .....  
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Key Individuals and provincial professional licensing status and/or professional accreditation:

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## APPENDIX B - DECLARATION/CERTIFICATIONS FORM

**Project Title:**

**Name of Proponent:**

**Street Address:**

**Mailing Address:**

**Telephone Number:** (    )

**Fax Number:** (    )

**E-Mail:**

**Procurement Business Number:**

Type of Organization:	Size of Organization:
<input type="checkbox"/> Sole Proprietorship	Number of Employees _____
<input type="checkbox"/> Partnership	Graduate Architects / Professional Engineers _____
<input type="checkbox"/> Corporation	Other Professionals _____
<input type="checkbox"/> Joint Venture	Technical Support _____
	Other _____

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## APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

### Former Public Servant (FPS) - Certification

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPS, proponents must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of proposals is completed, Canada will inform the Proponent of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the proposal non-responsive.

### Definitions

For the purposes of this clause,

"former public servant" is any former member of a department as defined in the *Financial Administration Act*, R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- (a) an individual;
- (b) an individual who has incorporated;
- (c) a partnership made of former public servants; or
- (d) a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the *Public Service Superannuation Act* (PSSA), R.S., 1985, c.P-36, and any increases paid pursuant to the *Supplementary Retirement Benefits Act*, R.S., 1985, c.S-24 as it affects the PSSA. It does not include pensions payable pursuant to the *Canadian Forces Superannuation Act*, R.S., 1985, c.C-17, the *Defence Services Pension Continuation Act*, 1970, c.D-3, the *Royal Canadian Mounted Police Pension Continuation Act*, 1970, c.R-10, and the *Royal Canadian Mounted Police Superannuation Act*, R.S., 1985, c.R-11, the *Members of*

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*Parliament Retiring Allowances Act*, R.S., 1985, c.M-5, and that portion of pension payable to the *Canada Pension Plan Act*, R.S., 1985, c.C-8.

## **APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)**

### **Former Public Servant in Receipt of a Pension**

As per the above definitions, is the Proponent a FPS in receipt of a pension?

YES (  ) NO (  )

If so, the Proponent must provide the following information, for all FPS in receipt of a pension, as applicable:

- (a) name of former public servant;
- (b) date of termination of employment or retirement from the Public Service.

By providing this information, proponents agree that the successful Proponent's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice: 2012-2 and the Guidelines on the Proactive Disclosure of Contracts.

### **Work Force Adjustment Directive**

Is the Proponent a FPS who received a lump sum payment pursuant to the terms of a work force reduction program? YES (  ) NO (  )

If so, the Proponent must provide the following information:

- (a) name of former public servant;
- (b) conditions of the lump sum payment incentive;
- (c) date of termination of employment;
- (d) amount of lump sum payment;
- (e) rate of pay on which lump sum payment is based;
- (f) period of lump sum payment including start date, end date and number of weeks;
- (g) number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

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## APPENDIX B - DECLARATION/CERTIFICATIONS FORM (CONT'D)

### Name of Proponent:

#### DECLARATION:

I, the undersigned, being a principal of the proponent, hereby certify that the information given on this form and in the attached proposal is accurate to the best of my knowledge. If any proposal is submitted by a partnership or joint venture, then the following is required from each component entity.

.....  
name signature

.....  
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....  
name signature

.....  
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

.....  
name signature

.....  
title

I have authority to bind the Corporation / Partnership / Sole Proprietorship / Joint Venture

During proposal evaluation period, PWGSC contact will be with the following person: \_\_\_\_\_.

Telephone Number: ( ) \_\_\_\_\_ Fax Number: ( ) \_\_\_\_\_

E-mail: \_\_\_\_\_

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### APPENDIX C - PRICE PROPOSAL FORM

INSTRUCTIONS: Complete this Price Proposal Form and submit in a **separate sealed envelope** with the Name of Proponent, Name of Project, PWGSC Solicitation Number, and the words "PRICE PROPOSAL FORM" typed on the outside of the envelope. Price Proposals are not to include Applicable Taxes.

PROPOSERS SHALL NOT ALTER THIS FORM

**Project Title:**

**Name of Proponent:**

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The following will form part of the evaluation process:

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#### REQUIRED SERVICES

##### Fixed Fee

	Preparation of Prequalification RFQ and Design-Build- Operate RFP	Design- Construction Administration	Commissioning, Operational, Training, Turnover and Closeout	Sub Total
Fees including sub-consultants				
Disbursements				
<b>Sub Total</b>				
<b>Totals</b>				

**TOTAL FEE FOR REQUIRED SERVICES** (R1230D (2015-02-25), GC 5 - Terms of Payment)

\$ \_\_\_\_\_

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## APPENDIX C - PRICE PROPOSAL FORM (CONT'D)

The following will NOT form part of the evaluation process

### THE FOLLOWING HOURLY RATES MAY BE USED FOR FUTURE CONTRACT AMENDMENTS

Name	\$ per hour
..... Prime Consultant.....	\$.....
..... Structural engineering.....	\$.....
..... Civil engineering.....	\$.....
..... Architect .....	\$.....
.....Wastewater Treatment Process engineering.....	\$.....
.....Electrical engineering.....	\$.....
..... Code Analyst .....	\$.....
.....Mechanical engineering.....	\$.....
.....Programming, instrumentation and controls engineering.....	\$.....
..... Geotechnical engineering.....	\$.....
.....Fire Protection.....	\$.....
.....Commissioning .....	\$.....
.....Operations and Training.....	\$.....

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## **APPENDIX E – SUBMISSION REQUIREMENTS AND EVALUATION (SRE)**

# **SUBMISSION REQUIREMENTS AND EVALUATION**

- SRE 1 General Information
  - SRE 2 Proposal Requirements
  - SRE 3 Submission Requirements and Evaluation
  - SRE 4 Price of Services
  - SRE 5 Total Score
  - SRE 6 Submission Requirements - Checklist
-

## SUBMISSION REQUIREMENTS AND EVALUATION

### SRE 1 GENERAL INFORMATION

#### 1.1 Reference to the Selection Procedure

An 'Overview of the Selection Procedure' can be found in R1410T General Instructions to Proponents (GI3).

#### 1.2 Calculation of Total Score

For this project the Total Score will be established as follows:

Technical Rating x 80%	=	Technical Score (Points)
<u>Price Rating x 20%</u>	=	<u>Price Score (Points)</u>
Total Score	=	Max. 100 Points

### SRE 2 PROPOSAL REQUIREMENTS

#### 2.1 Requirement for Proposal Format

The following proposal format information should be implemented when preparing the proposal.

- Submit one (1) bound original plus four (4) bound copies of the proposal
- Paper size should be - 216mm x 279mm (8.5" x 11")
- Minimum font size - 11 point Times or equal
- Minimum margins - 12 mm left, right, top, and bottom
- Double-sided submissions are preferred
- One (1) 'page' means one side of a 216mm x 279mm (8.5" x 11") sheet of paper
- 279mm x 432 mm (11" x 17") fold-out sheets for spreadsheets, organization charts etc. will be counted as two pages.
- The order of the proposals should follow the order established in the Request for Proposal SRE section

#### 2.2 Specific Requirements for Proposal Format

The maximum number of pages (including text and graphics) to be submitted for the Rated Requirements under SRE 3.2 is thirty (30) pages.

The following are not part of the page limitation mentioned above;

- Covering letter
  - Consultant Team Identification (Appendix A)
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- Declaration/Certifications Form (Appendix B)
- Code of Conduct Certifications
- Front page of the RFP
- Front page of revision(s) to the RFP
- Price Proposal Form (Appendix C)

***Consequence of non-compliance: any pages which extend beyond the above page limitation and any other attachments will be extracted from the proposal and will not be forwarded to the PWGSC Evaluation Board members for evaluation.***

### **SRE 3 SUBMISSION REQUIREMENTS AND EVALUATION**

#### **3.1 MANDATORY REQUIREMENTS**

Failure to meet the mandatory requirements will render the proposal as non-responsive and no further evaluation will be carried out.

##### **3.1.1 Licensing, Certification or Authorization**

The proponent shall be a registered Professional Engineer, licensed to provide the necessary professional services to the full extent required by the province of British Columbia. Provide evidence of the above license. **Photocopies of the license(s) must be included in the technical proposal.**

##### **3.1.2 Consultant Team Identification**

The consultant team to be identified must include the following:

Proponent (prime consultant) - Prime Consultant to function as Owner's Technical Consultant (OTC) and prepare a prequalification Request for Proposal (RFP), a Design-Build-Operate (DBO) RFP, a Statement of Requirements, and Design Development Requirements document; and to provide technical assistance during the design, construction, commissioning, operation and turnover/training phases of the DBO Contract for a new Wastewater Treatment Plant.

Key Sub-consultants / Specialists –

Wastewater treatment process engineering  
structural engineering  
civil engineering  
architecture

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code analyst  
mechanical engineering  
electrical engineering  
programming, instrumentation and controls engineering  
geotechnical engineering  
fire protection  
commissioning  
wastewater treatment operation and training

Information required - name of firm, key personnel to be assigned to the project. For the prime consultant indicate current license and/or how you intend to meet the provincial or territorial licensing requirements. In the case of a joint venture identify the existing or proposed legal form of the joint venture (refer to R1410T General Instructions to Proponents, G19 Limitation of Submissions).

An example of an acceptable format (typical) for submission of the team identification information is provided in Appendix A.

Failure to identify all specialist will deem the proposal non-responsive.

### **3.1.3 Declaration/Certifications Form**

Proponents must complete, sign and submit the following at tender closing date and time:

- Appendix B, Declaration/Certifications Form as required.

### **3.1.4 Integrity Provisions - Associated Information**

Proponents who are incorporated, including those submitting proposals as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Proponent. Proponents submitting proposals as sole proprietorship, including those submitting proposals as a joint venture, must provide the name of the owner. Proponents submitting proposals as societies, firms, or partnerships do not need to provide lists of names. If the required names have not been received by the time the evaluation of proposals is completed, Canada will inform the Proponent of a time frame within which to provide the information. Failure to provide the names within the time frame specified will render the bid non-responsive. Providing the required names is a mandatory requirement for contract award.

## **3.2 RATED REQUIREMENTS**

The evaluation criteria for the proposal addresses only the previous achievements and

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experiences of the proposed Consultant Team. The proposal provides the opportunity for proponents to present their past work in the context of the proposed project. Interested firms are to submit to PWGSC a history of their accomplishments in order to establish the capabilities of their teams and lead designers as well as other key team members.

### **3.2.1 Understanding of Major Issues and Objectives**

The proponent should demonstrate understanding of the goals of the project, the functional/technical requirements, the constraints and the issues that will shape the end product.

#### Information that should be supplied:

- The functional and technical requirements
- Broader goals (federal image, sustainable development, sensitivities)
- Significant issues, challenges and constraints
- Project schedule and cost. Review schedule and cost information and assess risk management elements that may affect the project

### **3.2.2 Experience and Resources of Proponents (Consultants)**

Describe the Proponent's experience and resources available to function as as prime consultant on domestic Wastewater Treatment Plant Projects as Owner's Technical Consultant.

Select a **maximum** of 3 projects undertaken within the last 15 years related to domestic wastewater treatment design, construction, commissioning, operation, and training from a DB(O) perspective. Joint venture submissions are not to exceed the maximum number of projects. Only the first 3 projects listed in sequence will receive consideration and any others will receive none as though not included.

#### Information that should be supplied:

- clearly indicate how this project is comparable/relevant to the requested project. This primarily includes experience as an OTC, however, experience as a member of a DB or DBO Contractor's Engineer can be submitted.
  - brief project description and role. Narratives should include a discussion of tendering, design, construction, commissioning, operation, training and turnover issues, challenges and resolutions in the context of a DB or DBO project. Describe quality plan employed for project. Provide any lessons learned.
  - budget control and management - i.e. contract price & final construction cost - explain variations. Also summarise change orders issued for the project including reason for and amount. Provide risk management and cost mitigating strategies employed.
-

- project schedule control and management - i.e. initial schedule and revised schedule - explain variation. Provide schedule control and action plans to return project to schedule, if applicable.
- client references - name, address, phone and email address of client contact at working level - references may be checked
- names of key personnel responsible for project delivery including their roles and responsibilities
- awards or recognition received for the project.

The Proponent (as defined in R1410T General Instructions to Proponents, GI2 Definitions) must possess the knowledge on the above projects. Past project experience from entities other than the Proponent will not be considered in the evaluation unless these entities form part of a joint venture Proponent. Proponents are strongly encouraged to provide specific relevant examples that clearly demonstrate the implementation of the methodology.

Please indicate those projects which were carried out in joint venture and the responsibilities of each of the involved entities in each project.

### **3.2.3 Experience, Qualifications and Availability of Team Members**

Describe the accomplishments, achievements and experience either as prime consultant or in a sub-consultant capacity on similar DB or DBO projects. If the Proponent proposes to provide multi-disciplinary services which might otherwise be performed by a sub-consultant, this should be reflected here.

The Proponent should clearly demonstrate knowledge, experience and effectiveness in their role as an OTC or as a member of a DB or DBO Contractor's Engineer.

Select a **maximum** of 3 projects undertaken within the last 15 years per key sub consultant or specialist. Only the first 3 projects listed in sequence (per key subconsultant or specialist) will receive consideration and any others will receive none as though not included.

#### Information that should be supplied:

- clearly indicate how this project is comparable/relevant to the requested project. This primarily includes experience as an OTC, however, experience as a member of a DB or DBO Contractor's Engineer can be submitted.
  - brief project description and role. Narratives should include a discussion of the actual work performed including preparation of RFQ, RFP, and Indicative Design Documents; commissioning, operations, training, and turnover requirements; and compliance and quality review of design, construction, commissioning, operations, training and turnover phases.
-

- budget control and management - Describe what was specifically done and how effective the implemented controls and management were for each project
- project schedule control and management - Describe what was specifically done and how effective the implemented controls and management were for each project
- client references - name, address, phone and email address of client contact at working level - references may be checked

### **3.2.4 Approach and Methodology (Workplan):**

The proponent should demonstrate capability to perform the services and meet project challenges and to provide a plan of action.

#### Information that should be supplied:

- Scope of Services - detailed list of services
- Work Plan - detailed breakdown showing level of effort, duration and deliverables
- Proposed Project Schedule

The approach and methodology should be prepared based on a comprehensive and effective plan developed from a thorough review of the Project Brief. The approach and methodology should reflect the Proponent's insight, creativity and quality in project delivery. PWSGC is interested in proposals that demonstrate efficiency and value for money. General marketing and promotional material will not be reviewed or considered.

### **3.2.5 Reporting and Quality Control**

Describe the quality control plan for the management of the DBO contract from a technical perspective. This includes scope, budget, schedule, change and risk management.

If the Proponent proposes to provide multi-disciplinary services which might otherwise be performed by a sub-consultant, this should be reflected here.

#### Information that should be supplied:

- Quality Control Plan
  - Confirm the makeup of the full project team including the names of the consultant sub-consultants and specialists personnel and their role on the project.
  - Organization chart with position titles and names (Consultant team). Joint Venture business plan, team structure and responsibilities, if applicable
  - What back-up will be committed
-

- Profiles of the key positions (specific assignments and responsibilities)
- How project team will be managed for effectiveness in project delivery
- Reporting relationships
- Communication strategies
- Response time: demonstrate how the response time requirements will be met
- Document control management including site reports; minutes of meetings; contemplated change notices and change orders; notices of non-compliance; requests for information and supplemental instructions; shop drawings review; operations and maintenance manuals; and record drawings

### 3.3 EVALUATION AND RATING

In the first instance, price envelopes will remain sealed and only the technical components of the proposals which are responsive will be reviewed, evaluated and rated by a PWGSC Evaluation Board in accordance with the following to establish Technical Ratings:

Criterion	Weight Factor	Rating	Weighted Rating
Understanding of Major Issues and Objectives	0.5	0 - 10	0 - 5
Relevant Experience and Resources of Proponents (Consultants)	2.0	0 - 10	0 - 20
Relevant Experience, Qualification and Availability of Team Members	2.0	0 - 10	0 - 20
Approach and Methodology (Workplan)	5.0	0 - 10	0 - 50
Reporting and Quality Control	0.5	0 - 10	0 - 5
Technical Rating	10.0		0 - 100

#### Generic Evaluation Table

PWGSC Evaluation Board members will evaluate the strengths and weaknesses of the Proponent's response to the evaluation criteria and will rate each criterion with even numbers (0, 2, 4, 6, 8 or 10) using the generic evaluation table below:

	INADEQUATE	WEAK	ADEQUATE	FULLY SATISFACTORY	STRONG
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0 point	2 points	4 points	6 points	8 points	10 points
Did not submit information which could be evaluated	Lacks complete or almost complete understanding of the requirements.	Has some understanding of the requirements but lacks adequate understanding in some areas of the requirements.	Demonstrates a good understanding of the requirements.	Demonstrates a very good understanding of the requirements.	Demonstrates an excellent understanding of the requirements.
	Weaknesses cannot be corrected	Generally doubtful that weaknesses can be corrected	Weaknesses can be corrected	No significant weaknesses	No apparent weaknesses
	Proponent do not possess qualifications and experience	Proponent lacks qualifications and experience	Proponent has an acceptable level of qualifications and experience	Proponent is qualified and experienced	Proponent is highly qualified and experienced
	Team proposed is not likely able to meet requirements	Team does not cover all components or overall experience is weak	Team covers most components and will likely meet requirements	Team covers all components - some members have worked successfully together	Strong team - has worked successfully together on comparable projects
	Sample projects not related to this requirement	Sample projects generally not related to this requirement	Sample projects generally related to this requirement	Sample projects directly related to this requirement	Leads in sample projects directly related to this requirement
	Extremely poor, insufficient to meet performance requirements	Little capability to meet performance requirements	Acceptable capability, should ensure adequate results	Satisfactory capability, should ensure effective results	Superior capability, should ensure very effective results

To be considered further, proponents **must** achieve a minimum Technical Rating of seventy-five (75) points out of the hundred (100) points available as specified above.

**No further consideration will be given to proponents not achieving the pass mark of seventy-five (75) points.**

## SRE 4 PRICE OF SERVICES

All price proposal envelopes corresponding to responsive proposals which have achieved the pass mark of fifty (75) points will be opened upon completion of the technical evaluation. An average price is determined by adding all the price proposals together and dividing the total by the number of price proposals being opened.

All price proposals which are greater than twenty-five percent (25%) above the average price will be set aside and receive no further consideration.

The remaining price proposals are rated as follows:

- A. The lowest price proposal receives a Price Rating of 100
- B. The second, third, fourth and fifth lowest prices receive Price Ratings of 80, 60, 40, and 20 respectively. All other price proposals receive a Price Rating of 0.
- C. On the rare occasions where two (or more) price proposals are identical, the matching price proposals receive the same rating and the corresponding number of following ratings are skipped.

The Price Rating is multiplied by the applicable percentage to establish the Price Score.

## **SRE 5 TOTAL SCORE**

Total Scores will be established in accordance with the following:

<b>Rating</b>	<b>Possible Range</b>	<b>% of Total Score</b>	<b>Score (Points)</b>
Technical Rating	0 - 100	80	0 - 80
Price Rating	0 - 100	20	0 - 20
Total Score		100	0 - 100

The Proponent receiving the highest Total Score is the first entity that the Evaluation Board will recommend for the provision of the required services. In the case of a tie, the proponent submitting the lower price for the services will be selected.

## **SRE 6 SUBMISSION REQUIREMENTS - CHECKLIST**

The following list of documents and forms is provided with the intention of assisting the Proponent in ensuring a complete submission. The Proponent is responsible for meeting all submission requirements.

Please follow detailed instructions in R1410T General Instructions to Proponents, GI16 Submission of Proposal. Proponents may choose to introduce their submissions with a cover letter.

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Team Identification - see typical format in Appendix A

Declaration/Certifications Form - completed and signed - form provided in Appendix B

Integrity Provisions - list of directors / owners

Integrity Provisions - declaration form (as applicable, pursuant to subsection Declaration of Convicted Offences, of section 01 of the General Instructions)

Proposal - one (1) original plus 3 copies required

Front page of RFP

Front page(s) of any solicitation amendment

In a separate envelope:

Price Proposal Form - one (1) completed and submitted in a separate envelope

## **APPENDIX F – PROJECT BRIEF**

### **PROJECT BRIEF**

#### **Description of Project**

PD 1 Project Information

PD 2 Project Identification

PD 3 Project Background

PD 4 Existing Documentation

PD 5 Client/PWGSC Requirements

PD 6 Project Objectives

PD 7 Issues

PD 8 OTC Services

#### **Description of Services**

PA 1 Project Administration

#### *Required Services*

RS 1 NA

RS 2 NA

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RS 3 Design Development

RS 4 Construction Documents

RS 5 RFP Tender and Evaluation & DBO Contract Award

RS 6 Construction and Contract Administration

RS 7 Commissioning, Operating and Turnover/Training

RS 8 Decommissioning

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## PROJECT BRIEF

This Project Brief is divided into two sections:

**Description of Project**  
**Description of Services**

For standards relating to the service provisions herein please refer to the document "Doing Business with PWGSC – Pacific Region". The standards in "Doing Business with PWGSC – Pacific Region" must be adhered to in conjunction with this scope of services.

## DESCRIPTION OF PROJECT

### PD 1 PROJECT INFORMATION

Public Works and Government Services Canada (PWGSC) intends to retain a firm of engineers specializing in municipal/domestic wastewater treatment for the provision of the services required for this project.

- 1.1 **PWGSC Project Title:** Mountain and Kent Institutions - Wastewater Treatment Plant Upgrade
- 1.2 **Location of the Project:** Agassiz, British Columbia
- 1.3 **PWGSC Project Number:** R.067583.001
- 1.4 **Client / User:** Correctional Service Canada
- 1.5 **PWGSC Project Manager:** To Be Announced after Contract Award

### PD 2 PROJECT IDENTIFICATION

#### 2.1 Description

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The existing Wastewater Treatment Plant (WWTP) serving the Kent and Mountain Institutions requires replacement. CSC commissioned a study to identify, evaluate and recommend options for WWTP upgrade, which was undertaken by STANTEC Consulting in 2014.

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As a result of that study, the CSC chose to install a Sequential Batch Reactor (SBR) as secondary treatment, disc cloth media filters as tertiary treatment, and UV disinfection. Concerning the sludge management, CSC chose to install a treatment system to digest and dewater sludge. The existing Wastewater treatment system is intended to be decommissioned after the new system has been installed.

CSC requires the design, construction and initial operation of a new WWTP based on the selected unit treatment operations and adjacent to the existing WWTP that will treat the existing and future wastewater flows and attain a standard of effluent quality (given identified elsewhere in this document). A design-build-operate (DBO) approach will be followed towards this end.

PWGSC is seeking a qualified and experienced Engineering firm to provide services for the following phases:

1. Preparation of a design-build-operate tender document and pre-qualification of a selected number of design-bid contractors
2. Assistance during the tender period
3. Design oversight
4. Construction Administration oversight
5. Commissioning and Operation oversight

## **2.2 Cost**

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The class D construction cost is estimated at \$6,000,000 [excludes GST].

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## 2.3 Schedule

The project duration is approximately 52 months with the following breakdown.

Milestone	Tentative Timeframe – Month Completed
RFP for OTC Issued	0
OTC Contract Award	2
RFQ (Pre Qualification) for 3 DBO Firms Issued	2
Final Statement of Requirements	4
3 DBO Firms Selected	5
DBO RFP Tendered	6
DBO Tender Period Ends	9
DBO Tender Review and Award	10
On-Site Construction Begins (subject to DBO Contractor's schedule)	12
1 <sup>st</sup> Certificate of Substantial Performance for the Construction and Commissioning of the new WWTP	24
2 <sup>ND</sup> Certificate of Substantial Performance for the initial 2 year Operation of the WWTP and Turnover/Training	48
Certificate of Completion	52

### PD 3 PROJECT BACKGROUND

The wastewater treatment plant (WWTP) was constructed in 1978 to treat wastewater from two federal correctional institutions, Kent institution and Mountain institution. The plant has gone through various changes and developments over the years to accommodate the increasing number of inmates and staff, and changing treatment requirements.

The current treatment system consists of a preliminary treatment by screening, secondary treatment by oxidation ditch and clarification of effluent by secondary clarifier equipped with scum removal mechanism. The sludge is stored in an aerobic tank and transported to the City of Chilliwack WWTP. The effluent from the clarifier is discharged to the stilling well and is passed through a UV disinfection facility and discharged to a side channel of the Fraser River. There is currently a problem with the plant in terms of wastewater

interception and treatment. The plant's capacity to treat wastewater from the complex is in question.

In 2013, a mandate was awarded to the consulting firm, Stantec, to conduct a pre-design study to investigate and evaluate options to treat the Kent and Mountain Institutions wastewater and sludge with the objective of complying with the Federal Wastewater Systems Effluent Regulations (at a minimum) and to mitigate the potential adverse effects of effluent discharge into the Fraser River.

The study identified and evaluated six treatment options, including completion of a cost-benefit analysis, from which the most cost-effective option was selected: a Sequential Batch Reactor (SBR) as secondary treatment, disc cloth media filters as tertiary treatment, and UV disinfection. Concerning the sludge management, Correctional Service Canada (CSC) chose to install a treatment system to digest and dewater sludge. The existing Wastewater treatment system is intended to be decommissioned after the new system has been installed.

#### **PD 4 EXISTING DOCUMENTATION**

- *Stantec 2014*, Kent and Mountain Institutions Wastewater Treatment Plant Pre-Design Study
- *Genivar 2013*, Kent/Mountain Institutions Wastewater Characterization Project
- *Opus Daytonknight 2011*, Kent - Mountain Institutions WWTP Upgrade Cost Estimate
- *Corix Utilities 2010*, Wastewater Operation Inspection and Assessment Report 2010 for Kent and Mountain Institutions.
- *Earth Tech 2007*, Kent-Mountain Institutions Wastewater Treatment Plant 2006 Annual Report.
- CSC, Technical Criteria, April 2015

#### **PD 5 CLIENT/PWGSC REQUIREMENTS**

PWGSC is seeking to engage an Owner's Technical Consultant (OTC) with the necessary expertise, capacity and resources to meet the project objectives and to oversee the design, construction, commissioning, initial operation and turnover/training stages of the Wastewater Treatment Plant (WWTP) upgrade serving Kent and Mountain Institutions near Agassiz, BC.

The OTC will fulfill this role through:

- Preparation of an RFQ to pre-qualify a limited number of DBO Contractors and assistance with tendering and evaluations of submissions
-

- Preparation of a tender document for the DBO contract including completion of an indicative design for the tender document and assistance with tendering and evaluations of submissions
- Technical oversight of the design, construction, commissioning, decommissioning, initial operation and turnover/training phases.

The OTC will be responsible for ensuring the following specific required elements of the project are successfully incorporated and/or performed:

- Applicable Codes, Standards and Authorities – by the DBO Contractor
    - Federal Wastewater Systems Effluent Regulations WSER 2012 (SOR/2012-139 <http://laws-lois.justice.gc.ca/eng/regulations/sor-2012-139/FullText.html>)
    - NBC 2010
    - BCBC for seismic restraint
  - Design and Construction Documents – by the DBO Contractor
    - National Master Specification format
    - Provision by the DBO Contractor of signed and sealed final, 100% complete drawings and specifications by the appropriate professional discipline engineer registered to practice in the province of British Columbia. Engineer's schedules required for compliance to NBC.
    - Drawings in accordance with PWGSC National CADD Standard
  - Indicative design – by OTC for the DBO tender document
  - Project Meetings – by the OTC
    - Chair meetings and prepare and distribute meeting agendas and minutes.
    - Define frequency of meetings
    - Arrange for meeting notifications
  - Construction Quality Control – by the DBO Contractor, with oversight by the OTC
    - QA/QC testing to be the responsibility of the DBO Contractor with review by the OTC
    - Confirmation of any required retesting of deficient work by the DBO Contractor
  - Shop Drawings, Product Data and Sample Requirements - by the DBO Contractor, with review by the OTC
    - OTC to define general requirements and procedures for submissions
    - Purpose of submissions does not alleviate DBO Contractor's responsibilities for errors or omissions
    - Responsibility for confirming dimensions and fabrication processes, techniques of construction and installation or coordination of work is the responsibility of the DBO Contractor
    - Shop drawings to be stamped and signed by respective professionals as required
  - Temporary construction facilities - by the DBO Contractor
-

- Ensure that construction activity does in no way adversely affect the operation of the existing WWTP during construction
  - Material and Equipment – by the OTC
    - Define expected quality and information to be submitted for proposed equipment and material for tender submission
  - General Quality of Work – by the OTC
    - Define the general quality objectives and measures for the design and operation of the new WWTP
    - Define the means by which the general quality of the work will be monitored and measured
  - Cost Control - by the DBO Contractor with oversight by the OTC
    - Manage the contract within the established contract amount to meet the project and project quality objectives
    - Take appropriate action to correct any cost deviations without compromising project and project quality objectives
  - Commissioning Requirements – by the OTC
    - Define components, systems and controls to be commissioned and the timing of commissioning during construction
    - Define objectives and requirements for commissioning
    - Define requirements of the Commissioning Plan detailing how various system components and entire WWTP will be commissioned
    - Define acceptance criteria and requirements for verification reports from DBO Contractor
    - Define role and responsibilities for the Third party commissioning agent retained by the DBO Contractor
  - Commissioning Plan and Report - prepared by the DBO Contractor, with review and oversight by the OTC
    - Includes report from the Third Party Commissioning Agent confirming that the entire works have been constructed and will operate in accordance with the Contract.
  - Operation Performance Period. DBO Contractor with oversight by the OTC
    - DBO shall be responsible for the O&M of the WWTP during the required performance period. DBO Contractor with oversight by the OTC shall demonstrate efficient operation of the WWTP, in compliance with the project performance standards.
    - During the performance period, OTC shall observe and evaluate plant operations and provide advice and assistance to achieve satisfactory plant performance. The DBO shall be responsible for any corrective action necessary to bring the project into compliance with performance criteria. A schedule for undertaking corrective action in a timely manner shall be prepared by DBO and approved by OTC.
-

- Prepare a certification report and submit it to Department representative.
- WWTP O&M Manual – prepared by the DBO Contractor, with review by the OTC
  - OTC to define requirements for a WWTP O&M Manual that includes operational and maintenance information, troubleshooting procedures, monitoring requirements, as-built information, commissioning reports, training data, reviewed shop drawings, change orders, etc.
  - Evaluation of WWTP O&M Manual based on implementation during initial operation, training and turnover phases
- Initial Operation and Maintenance of the New WWTP – by the DBO Contractor with oversight by the OTC
  - For a period of two years from the date the 1<sup>st</sup> Certificate of Substantial Performance is issued for construction of the works.
- Turnover/Training Plan - prepared by the DBO Contractor, with review and oversight by the OTC
  - Includes operation of the WWTP in accordance with the WWTP O&M Manual
  - Includes confirmation that all instrumentation for the control and monitoring of the WWTP operation functions as required and has been tested in alarm conditions
  - Includes training scenarios in which troubleshooting is required
  - Includes training on routine sampling and laboratory analytical methods to be performed at the WWTP by the operator
- Close-out procedures and submittal requirements - prepared by the DBO Contractor, with review and oversight by the OTC
  - Deficiency resolution and documentation confirming resolution
  - As-Built Drawings and Specifications
  - Substantial Performance and Completion submissions – Two Certificates of Substantial Performance will be issued:
    - i. Constructed Works
    - ii. Completion of 2 Year Initial WWTP Operation by the DBO Contractor
- Health and Safety Plan - prepared by and the responsibility of the DBO Contractor
- Decommissioning of existing WWTP components not retained in new WWTP

## **PD 6 PROJECT OBJECTIVES**

General for the DBO Project

The OTC shall ensure that the following objectives are met by the DBO Contractor:

- Design – Based on the pre-selected Sequencing Batch Reactor, Cloth Disc Media Filter, UV Disinfection and Sludge Digestion and Dewatering technologies from the
-

*Stantec 2014, Kent and Mountain Institutions Wastewater Treatment Plant Pre-Design Study.*

- Continued Operation of Existing WWTP during construction of the new WWTP.
- Wastewater Effluent Quality – At a minimum, compliance with the Federal Wastewater Systems Effluent Regulations, however, the quality achieved should be optimized based on the technologies used.
- WWTP Operation and Performance – Provides consistent effluent quality under the varying conditions of load. This includes both automatic control technologies and manual adjustments. The operation must be effectively described in detail and in readily understood language in the WWTP O&M Manual. The WWTP O&M Manual must also effectively explain how to respond to varying load conditions in addition to a comprehensive troubleshooting guide. Overall, the operation shall be reliable based on minimal operator attention. Incorporation of the existing lift stations serving the institutions into the SCADA system is included in this project.
- Initial Operation –The DBO Contractor will be responsible for the operation and maintenance of the WWTP for a period of two years following issuance of the Certificate of Substantial Performance for the constructed works.
- Life Cycle – The systems, equipment and materials must be incorporated into a plant that provides a long service life, readily replaceable parts, expandability and flexibility.
- Turnover/Training – Effective plant turnover to the user group with comprehensive training of the treatment technology, plant operation, strategies for modifying plant operation in response to changing conditions, troubleshooting and monitoring and reporting systems.
- Decommissioning of the Existing WWTP – Environmentally responsible decommissioning of the remaining components of the existing WWTP not retained in the new WWTP.

General for the OTC

The OTC will provide overall management of the DBO contract from a quality control perspective. The OTC will prepare the main RFP documents for pre-qualification of the DBO firms and the DBO project.

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The OTC will provide technical input on all phases of the project, from the RFP stage to the turnover/training and closeout stage. The OTC will be responsible for advising PWGSC on technical issues related to design, construction, operation, commissioning, training and turnover. Moreover, the OTC will monitor the quality and progress of the design-build-operate process.

The OTC will attend all key meetings throughout the project and provide regular reports on the project progress. In summary, PWGSC places the responsibility of meeting the quality, cost and schedule objectives for the project with the OTC.

## **6.1 Quality**

### **6.1.1 Design Principles - General**

PWGSC expects the OTC to ensure a high standard of engineering design is provided by the DBO Contractor, based upon recognized contemporary design principles. All design elements, planning, architectural, engineering and landscaping, must be fully co-ordinated, and consistent in adherence to good design principles.

The project is to be implemented in an environmentally responsible manner.

Quality of materials and construction methods shall be commensurate with the type of building and the budget. Avoid experimental materials. Take into account the total life-cycling of the plant.

Operating costs must be kept to a minimum and reflect the projected operating costs in the cost plan. This is to be achieved by compliance with the Energy Budget, selection of equipment, requiring the minimum of operating personnel, and building finishes for easy maintenance, etc.

The character, massing, scale, materials of this project will be compatible with its surrounding context.

Design for maximum flexibility in immediate and future use of space and operation. Where possible, devise a building grid with column spacing, fenestration and service runs suited to flexible interior space arrangements.

## **6.2 Sustainable Development**

The Canadian Federal Government has begun a series of initiatives to ensure that sustainable development principles are built into the policy of all federal organizations.

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Public Works and Government Services Canada (PWGSC) and Correctional Service Canada (CSC) like all federal PWGSCs are required to have a Sustainable Development Strategy (SDS). Real Property Services Branch of PWGSC has developed their Strategy Plan, that sets out principles, goals and actions for integrating sustainable development principles into its policies and operations. The Branch has established the following sustainable development goals under the issues of management, leadership and operation.

CSC has adopted effluent quality standards that are applicable to this project and the WWTP design and operation shall comply to that standard, amongst others.

### **6.3 Waste Management**

The Construction, Renovation, and Demolition (CRD) Non-hazardous Solid Waste Management Protocol to which Real Property Services (RPS) is bound, provides directions on the undertaking of non-hazardous solid waste management actions for CRD projects. The protocol is designed to meet the requirements of federal and provincial policies and the objectives of the RPS Sustainable Development Strategy (SDS) as these relate to non-hazardous solid waste generated in CRD projects.

For all Real Property Services projects where the area exceeds 2,000 m<sup>2</sup>, a solid waste management program must be implemented. For projects where the area is less than 2,000 m<sup>2</sup>, a preliminary waste management evaluation of the economic feasibility of a waste management program must be carried out.

### **6.4 Code Compliance**

Codes, regulations, by laws and decisions of "authorities having jurisdiction" will be observed, although, by default, the NBC must be followed as a general rule. In cases of overlap, the most stringent will apply. The OTC shall identify other jurisdictions appropriate to the project with the approval of PWGSC.

The BC Building Code requirements for seismic restraint must be incorporated. The OTC will ensure that the design of the WWTP confirms with the applicable codes, regulations, etc.

### **6.5 Risk Management**

A risk management strategy is crucial for PWGSC Project Management and integrates project planning into procurement planning. All the stakeholders of a project will be an integral part of the risk management strategy, culminating in an integrated product team. Specific services required for project delivery are outlined in Required Services.

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For this project, the DBO Contractor will carry the risk for design and construction and thus a risk management strategy plan would be prepared by the DBO Contractor. The OTC must also advise PWGSC regarding the potential and anticipated risks to the project and assist in mitigating those risks with the Project Team.

## **6.6 Health and Safety**

Public Works and Government Services Canada (PWGSC), recognizes the responsibility to ensure the health and safety of all persons on Crown construction projects and the entitlement of both federal employees and private sector workers to the full protection afforded them by occupational health and safety regulations.

In keeping with the responsibility and in order to enhance health and safety protection for all individuals on federal construction sites, PWGSC will voluntarily comply with the applicable provincial/territorial construction health and safety acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations.

The DBO Contractor will be the prime contractor as defined in WorkSafe BC Regulations.

## **6.7 Cost Control**

PWGSC expects that the DBO approach will result in a cost effective project. Furthermore, any additions to the DBO contract will be attributable to measures beyond the control of the DBO contractor.

The DBO Contractor is responsible for managing the project within the approved contract amount and for recovery in the event there are deviations from this objective. The OTC will oversee this responsibility.

## **6.8 Schedule Control**

PWGSC expects that the DBO approach will result in a savings in project time compared to conventional contracting methods. Timely completion of the project is thus expected.

The DBO Contractor is responsible for managing the project within the approved contract timeframe and for recovery in the event there are deviations from this objective. The OTC will oversee this responsibility.

## **PD 7 ISSUES**

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## **7.1 Major Cost Issues**

### **Accurate Cost Estimates**

Effective cost estimating and cost control is of prime importance and shall be provided by professional quantity surveyors retained by the DBO Contractor. The Class C and Class B cost estimates shall be submitted in elemental cost analysis format. The standard of acceptance for this format is the current issue of the elemental cost analysis format issued by the Canadian Institute of Quantity Surveyors.

The class A cost estimate shall be submitted in trade cost breakdown format. Cost estimates shall have a summary plus full back-up showing items of work, quantities, unit prices and amounts.

## **7.2 Major Time Issues**

Effective management of project schedule requires diligence and organization on the part of the DBO Contractor. A baseline schedule must be produced by the DBO Contractor. Any deviations from the baseline schedule that result in a later completion date will only be recognized if such deviation is determined by PWGSC to be beyond the control of the DBO Contractor. The DBO Contractor must provide monthly schedule updates including identification of any deviations from the baseline schedule that result in a later completion date accompanied by a written explanation of why this deviation occurred and a plan to bring the project back on schedule. No claims for extra cost for such deviations will be accepted.

Additional time and expense incurred by the OTC or any other firm contracted by PWGSC for this project as a result of late completion by the DBO Contractor will be paid by the DBO Contractor through change order.

Approval of monthly progress claims will be contingent upon approval of the monthly schedule by PWGSC.

## **7.3 Major Quality Issues**

The OTC will represent the interests of PWGSC and stakeholders regarding the expected quality objectives for the project. Therefore, the OTC will oversee and report on the design, construction, commissioning, decommissioning and operating phases of the project against the objectives stated herein. The OTC will provide recommendations to PWGSC for action in the event that the DBO Contractor is not meeting these objectives.

## **PD 8 OTC SERVICES**

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Solicitation No. - N° de l'invitation  
EZ899-161301/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv028

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

File No. - N° du dossier CCC No./N°

CCC - FMS No./N° VME

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The Owner's Technical OTC team for this project must be capable of providing the following services:

- Wastewater treatment process engineering
- structural engineering
- civil engineering
- architecture
- code analyst
- mechanical engineering
- electrical engineering
- programming, instrumentation and controls engineering
- geotechnical engineering
- fire protection
- commissioning
- wastewater treatment operation and training

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## DESCRIPTION OF SERVICES

### PA 1 PROJECT ADMINISTRATION

#### INTENT

The following administrative requirements apply during all phases of project delivery.

#### 1.1 PWGSC Project Management

##### Departmental Representative

The PWGSC Project Manager assigned to the project is Departmental Representative.

The Departmental Representative is directly concerned with the overall project and responsible for its progress. The Departmental Representative is the liaison between the OTC, Public Works and Government Services Canada (PWGSC) and Correctional Service Canada (CSC).

PWGSC administers the project and exercises continuing control over the OTC's work during all phases.

##### OTC Project Management

The OTC will manage the RFQ, RFP, design, construction, commissioning, decommissioning of existing WWTP, 2 year operational and maintenance period, turnover and training phase, and post construction period of the project from a technical and quality perspective.

The OTC will be required to report and provide routine submissions to the Departmental Representative related to on-going project management.

#### 1.2 General Project Deliverables

Where deliverables and submissions include summaries, reports, drawings, plans or schedules, five (5) hard copies shall be provided plus one (1) copy shall be provided in electronic format unless otherwise specified.

#### 1.3 Lines of Communication

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Unless otherwise arranged with the Departmental Representative, the OTC shall communicate with the Departmental Representative only. There shall be no direct official contact between CSC and the OTC.

During the DBO tender call, PWGSC conducts all correspondence with bidders and makes the contract award.

#### **1.4 Media**

The OTC shall not respond to requests for project related information or questions from the media. Such inquiries are to be directed to the Departmental Representative.

#### **1.5 Meetings**

The OTC shall arrange monthly meetings throughout the entire project period, for all members of project team, including representatives from:

- CSC
- Public Works and Government Services Canada
- OTC
- Other firms retained by PWGSC for this project
- DBO Contractor

The OTC shall attend the meetings, record the issues and decisions and prepare and distribute minutes within 72 hours of the meeting.

#### **1.6 Project Response Time**

It is a requirement of this project that the key personnel of the successful proponent and sub-consultants or specialist firms be personally available to attend meeting or respond to inquiries within 2 business days.

#### **1.7 Submissions, Reviews and Approvals**

##### **Project Team Review – PWGSC, CSC**

- Submission Format:  
Reports; RFPs; Indicative Design; oral presentation (with visual aid material, e.g., Powerpoint); minutes of meetings; evaluations; responses to queries, issues, plans, update status reports, etc. - via email in PDF

Expected Turnaround Time:

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- Reports, Indicative Design (including Statement of Requirements), RFPs, Evaluations, Plans, Project Status Reports – These submissions are provided in accordance with the project schedule.
  - Minutes of Meetings, Responses – These submissions are returned in 1 week and 2 days, respectively.
- Number of Submissions:
- Reports, Indicative Design (including Statement of Requirements), RFPs – As per Contract and until approval has been received.
  - Minutes of Meetings, Responses, Evaluations – One and perhaps two if clarifications, revisions or corrections are requested.

## REQUIRED SERVICES

RS 1` - N/A

RS 2 – N/A

### RS 3 DESIGN DEVELOPMENT

#### 3.1 INTENT

To further develop the selected treatment processes presented in STANTEC's Pre-Design Study Report. The Indicative Design documents prepared by the OTC consist of drawings and other documents to describe the size and character of the entire project as to architectural, structural, mechanical, process, instrumentation and electrical systems, materials and such other elements as may be appropriate. The Indicative Design represents approximately the 25% stage of design development and provides the design criteria, overall layout and other information sufficient to enable the DBO bidders to prepare an accurate bid.

The first step will be the development of the Statement of Requirements.

#### 3.2 Development of the Statement of Requirements

##### Scope and Activities:

- Review STANTEC's Pre-Design Study Report , which provides the selected unit operations for the treatment process and summarise the basis for the indicative design. Review other related technical reports and include pertinent information.
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- PWGSC will contract for a site geotechnical investigation and report, as well as for a site survey. The OTC will assist PWGSC with the preparation of the scope of work for those two activities. The geotechnical report and the survey will be made available to the DBO bidders.
- Prepare a Statement of Requirements summarizing the treatment processes, performance objectives, project design and construction quality requirements, submissions, equipment requirements, functional requirements, current and future wastewater flows, influent characteristics, effluent quality requirements, redundancy, code review requirements, operational requirements, commissioning and decommissioning requirements, training and turnover requirements, at a minimum.
- If any alterations are demanded by CSC, document all required changes, analyze the impact on all project components, and resubmit for approval if required.

### 3.3 Indicative Design - Overall

The OTC will be required to develop an Indicative Design of the proposed WWTP:

- i. Determine equipment sizing
- ii. Provide a layout of the proposed WWTP components showing the spatial relationships
- iii. Summarise the design criteria for the major components of the proposed WWTP
- iv. Develop a plant model to represent plant treatment systems and effluent quality based on expected plant influent characteristics and flows. Note that plant flows and characteristics are variable in nature. Plant is to incorporate redundancy criteria in the unit processes.
- v. Identify the proposed major materials of construction and equipment.
- vi. Identify any issues or risks for the design and construction processes.
- vii. Identify all applicable statutes, regulations, codes and by-laws in relation to the design of the project
- viii. Provide process flow diagram, basic calculations, elevations, and hydraulic grade line diagram.
- ix. Provide a Class C cost estimate of the DBO project.
- x. Provide a project schedule for the design and construction phase.

### Specific Scope and Activities:

#### 3.3.1 Architectural:

- Site Plan showing the general layout of unit treatment operations, building(s) and existing or proposed features.
  - Options for architectural design of building(s). If existing building(s) are to be retained in the new WWTP, include retrofit for windows, door, finishing, flooring, etc.)
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- Cross sections through the site to show the relationship of buildings to proposed ground elevations (above the 200 year flood plain elevation).
- Demolition requirements for existing WWTP.

### 3.3.2 Structural Drawings:

Drawings indicating the proposed structural framing system, type of foundation, structural materials, cladding details and other significant or unusual details proposed. Drawings may be separate or incorporated on the Architectural sheets.

### 3.3.3 Mechanical:

- Proposed ventilation, cooling and heating systems showing locations, and all major equipment layouts in mechanical and process rooms.
- Required fire protection systems showing major components.
- Describe the mechanical systems to be provided and the components of each system. Describe the perceived operation of the mechanical systems.
- Describe the building systems control architecture.
- Explain what acoustical and sound control measures are to be included in the design.

### 3.3.4 Electrical:

- Provide instrumentation and control equipment and strategy for treatment process.
- Process and Instrumentation Diagram to show required level of Supervisory Control and Data Acquisition
- Provide proposed lighting requirements.
- Identify energy savings requirements.
- Review STANTEC's Pre-Design Study Report and incorporate recommendations into Indicative Design.

### 3.3.5 Commissioning

- Define operational and process control requirements including operational adjustments to
- Define Commissioning Requirements.
- Prepare a commissioning Brief describing major commissioning activities for process, mechanical, electrical and integrated system testing.

### 3.3.6 Civil/Process:

- Plan, section and select details of each unit treatment operation and supporting components (e.g., pumphouses) to indicate requirements
-

- Size the major process equipment
- WWTP layout
- Identify options for major equipment for each unit treatment operation
- Identify options for materials of construction for all major components
- Hydraulic Grade Line Diagram
- Process Flow Diagram
- Identify requirements for incorporation of existing WWTP components to be retained for new WWTP (e.g., headworks including equalization tank and auger screens) and decommissioning of remaining, existing WWTP components.
- Operational plan requirements
- Training and turnover requirements
- Provide options for odour control in the main odour-generating areas of the WWTP.

### **3.4 Request for Qualifications (RFQ) for Pre-Qualification of DBO Firms**

Request for Qualifications:

- The OTC will prepare the technical requirements for the RFQ based on the following criteria, at a minimum:
    - Participation on a minimum of three (3) Design-Build-Operate projects for municipal WWTPs
    - Contracting and Engineering firms with a minimum of fifteen (15) years of demonstrated experience, including all key project team members, in domestic wastewater treatment plant design, construction, and commissioning
    - Project team members shall possess applicable professional registration
    - Key Project team members shall have a minimum of 15 years relevant experience
    - Demonstrated operational experience with domestic wastewater treatment plant operations including preparation of an O&M Manual and training program
    - Knowledge of federal government contracting
-

The OTC will recommend additional criteria for consideration for incorporation by PWGSC to ensure that the RFQ process results in the selection of competent, proven, and experienced DBO Contractors.

- The OTC will provide technical support to PWGSC through the request for qualifications phase.
- The OTC will assist in evaluation of RFQ responses, resulting in a shortlist of three (3) Proponents.

### 3.5 Request for Proposal for DBO Contract

The OTC will provide input into the development of the RFP document to ensure that all requirements are adequate to provide PWGSC with a facility that meets the functional requirements in the SOR and the project objectives.

The OTC will provide an RFP that incorporates the requirements of the following key elements, at a minimum:

- Level of design
- Level of detail for drawings
- Classification level of Construction Cost Estimate
- Major materials of construction
- Major equipment information including options
- Quality objectives and measures
- DB phasing strategy
- Cost control
- Schedule control
- Operational strategy and methods
- Plant performance
- WWTP O&M Manual
- Commissioning and decommissioning of existing WWTP and associated documentation
- 2 year operation and maintenance by DBO Contractor
- Training and turnover

The OTC will provide input into the development of evaluation criteria for the RFP, which shall include evaluation of the following elements at a minimum:

- Innovation within the constraints of the Indicative Design
- Design understanding and quality
- DB Phasing
- Cost Control Management
- Project Schedule and Schedule Control Management
- Quality control and management
- Project Management
- Plant operational strategy and methods
- 2 year operation and maintenance of WWTP Plan
- Commissioning and Decommissioning Plan
- Training and turnover Plan

### 3.6 DELIVERABLES:

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- Statement of Requirements Document including scope of work for geotechnical and
- Indicative Design Document including identification of major equipment
  - Class 'C' cost estimate
  - Preliminary design and construction schedule including long term delivery items
  - Operational and Commissioning Plan Requirements Document
  - Decommissioning Plan for existing WWTP
- RFQ for DBO Firms
- RFP for DBO project

## **RS 4 CONSTRUCTION DOCUMENTS**

### **4.1 INTENT**

The OTC shall oversee the DBO Contractor's design and preparation of construction documents for conformance to the Indicative Design and project objectives.

For design, the following applies,

- 33% indicates technical 33% completeness of all working documents
- 66% indicates substantial technical development of the project - well advanced architectural and engineering plans, details, schedules and specifications
- 99% is the submission of complete Construction Documents including: commissioning plan and plant operations manual; updated Cost Plan and Project Schedule; and support data, studies, calculations, etc.
- Final Submission incorporates all revisions required in the 99% version and is intended to provide PWGSC with complete construction documents including:
  - Complete set of working drawings.
  - Complete sets of specifications.
  - Class 'A' cost estimate
  - Complete Commissioning Plan
  - Complete Decommissioning Plan
  - Complete Systems Operations manual

### **Scope and Activities:**

The Owner's Technical Consultant (OTC) shall carry out the following services during the design component of the DBO project:

- Provide PWGSC with technical advice on design.
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- Review 33, 66, and 99% stages of design progress to ensure conformance with Indicative Design in terms of scope and level of design required. Provide reports to PWGSC for each stage evaluating the design against the SOR and project objectives.
  - Review submissions by the DBO Contractor including design submissions, shop drawings, mock-ups, and commissioning information.
  - Review and advise PWGSC regarding the proposed selections of key materials of construction and major process equipment.
  - Ascertain that the progress and execution of the work, and its quality and workmanship generally comply with relevant terms and conditions of the contract, and use best efforts to guard PWGSC against defects and deficiencies in the work.
  - Ensure that the format of the drawings and specifications conforms to federal government and PWGSC requirements, and all applicable codes.
  - Ensure all review comments and requested changes are incorporated into Construction Documents where required.
  - Provide compliance and Quality Assurance (QA) including review of DBO Contractor Quality Control (QC) elements
  - Report on design progress against the proposed design schedule and report decisions and issues.
  - Review cost estimates provided by the DBO Contractor.
  - OTC shall prepare minutes of design meetings and distribute copies to all participants.
  - Calculations submitted by the DBO Contractor shall not necessarily be reviewed. They are required for record purposes and in certain instances to assist in the understanding and interpretation of designs.
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## **RS 5 RFP TENDER AND EVALUATION AND DBO CONTRACT AWARD**

### **5.1 INTENT**

To obtain and evaluate bids from the pre-qualified DBO contractors to design, construct and operate the new WWTP. To award the construction contract according to government regulations, including Federal Rules for Bid Depositories.

The OTC will provide assistance to PWGSC during the RFP tender period and proposal evaluation process as described below.

### **5.2 GENERAL**

#### **Scope and Activities:**

- Attend bidders briefing meeting(s)
  - Prepare addenda based on questions arising in such meetings for issue by the Departmental Representative.
  - Provide the Departmental Representative with all information required by bidders to fully interpret the RFP. The Departmental Representative will issue the addenda to all participants.
  - Keep full notes of all inquiries during the bidding period and submit same to Departmental Representative at the end, for PWGSC records.
  - The OTC shall prepare and coordinate a mandatory bidder conference and visit of the site
  - The OTC will assist PWGSC with the preparation of responses to questions from bidders during the RFP tender period.
  - The OTC will attend two (2) commercial-in-confidence meeting with each Bidder. The purpose of the meetings is to provide an opportunity for the bidders to confirm that their interpretation of the RFP is accurate and to raise any questions.
  - The OTC will be a member of the Evaluation Committee (along with PWGSC and CSC representatives) and will complete the technical evaluation of the Proponent submissions, including a comprehensive review and analysis for compliance.
  - The objective of the Evaluation Committee will be to select the proposal that in its opinion meets the project's requirements and Indicative Design, and provides the best overall value to PWGSC. It will ensure that the selected DBO Contractor is committed to and capable of delivering a quality product with best value for PWGSC taking into consideration critical issues such as long term
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operating costs, durability and reliability.

- The evaluation must be conducted in accordance with the published RFP evaluation criteria and may involve OTC participation in meetings with respective individual Proponents.
- Assist in tender evaluation by providing advice on the following:
  - The completeness of tender documents in all respects.
  - The technical aspects of the tenders.
  - The effect of alternatives and qualifications which may have been included in the tender.
  - The bidder's capability to undertake the full scope of work.
- If PWGSC decides to re-tender the project, provide advice and assistance to the Departmental Representative
- Examine and report on any cost and schedule impact created by the issue of tender / contract addenda

### **5.3 DELIVERABLES**

- Maintain notes of all inquiries from bidders
  - Provide responses to inquiries as required
  - Prepare minutes from the commercial-in-confidence meetings
  - Provide minutes from Bidder's conference and site visit
  - Addenda where needed
  - Changes to the documents, if re-tendering is necessary
  - Updated cost estimate or schedule
  - Provide written evaluation of all proposals
-

## **RS 6 CONSTRUCTION AND CONTRACT ADMINISTRATION**

### **6.1 INTENT**

The OTC will ensure that the project is constructed in compliance with the Contract Documents. While the DBO Contractor is fully responsible for the design and construction of the new WWTP, oversight by the OTC will provide greater assurance to PWGSC that the construction process will result in successful implementation of the Indicative Design and attainment of the project objectives.

### **6.2 GENERAL**

#### **Scope and Activities:**

- Carry out the review of the work at intervals appropriate to determine if the work is in conformity with the Contract Documents. Provide compliance reviews of DBO design/drawing submissions as to civil, landscape, architectural, (fully coordinated with structural), mechanical, process and electrical systems, materials and such other elements as may be appropriate. Compliance reviews to include but not limited to:
    - Functional relations;
    - Site plan, including scope of all site development, grades/contours, site servicing, setbacks, civil and landscaping;
    - Review of the code analysis;
    - Review of all structural and foundation systems;
    - Review of mechanical systems, fire protection, plumbing, HVAC and special controls;
    - Review of electrical, lighting, data, communication, and security systems;
    - Review of special construction systems, energy standards and conservation initiatives, demolition and integration issues;
    - Review of special features and detailed descriptions;
    - Review the treatment system details including proposed operational technology.
  - Keep PWGSC informed of the progress and quality of the work and report any defects or deficiencies in the work observed during the course of the site review
  - Recommend rejection of work that does not conform to the Contract, and whenever it is necessary or advisable for the implementation of the intent of the Contract, recommend special inspection or testing of work, whether or not such work has been fabricated, installed or completed.
  - Review and take other appropriate action with reasonable promptness upon such DBO Contractor's submittals as shop drawings, product data and samples, for conformance with the Indicative Design.
  - Provide Quality Assurance reviews by verifying the DBO Contractor's quality control plan is adhered to through mock-ups, third party testing and inspections, and field reviews by the DBO Contractor's Consultants. Review, plan, and recommend such periodic selective sampling procedures at the Project site as
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necessary to ascertain general compliance with the DBO Contractor's completion of corrections.

- Participate in the deficiency review process and assign deficiency retention values.
- Determine the amounts owing to the Contractor based on the progress of the work and certify payments to the contractor
- Provide cost advice during construction
- Ensure compliance with Commissioning and Decommissioning requirements
- During the twelve (12) month warranty period investigate all defects and alleged defects and issue to the Departmental Representative

## 6.3 DETAILS

### Scope and Activities:

#### 6.3.1 Construction Meetings

- Arrange for and prepare meeting agenda and minutes, and distribute copies to all participants and to other persons agreed upon with the Departmental Representative.
- Call progress meetings as frequently as required, commencing with the construction briefing meeting.

#### 6.3.2 Project Schedule

- Obtain Project Schedule from the DBO Contractor with detailed commissioning component shown separately, as soon as possible after contract award and ensure proper distribution.
- Monitor the approved construction schedule, and submit a detailed report to the Departmental Representative concerning any delays. OTC to follow-up with DBO Contractor regarding action to be taken by the latter to recover the
- Keep accurate records of causes of delays.
- Make every effort to assist the DBO Contractor to avoid delays.

#### 6.3.3 Time Extensions

Only PWGSC may approve any request for Time Extensions. Approval will be issued in writing by PWGSC upon application by the DBO Contractor and evaluation and approval by PWGSC.

#### 6.3.4 Cost Breakdown

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Obtain a detailed cost breakdown from the DBO Contractor on the PWGSC progress claim form and submit to the Departmental Representative with the first Progress Claim.

#### 6.3.5 Sub-contractor Changes

The DBO Contractor is required to use the sub-contractors listed in their proposal unless a change is authorized by PWGSC. Changes are only considered when they involve no increase in cost. Review all requests for changes of sub-contractors and submit recommendations to the Departmental Representative.

#### 6.3.6 Labour Requirements

- The DBO Contractor is bound by the Contract to maintain competent and suitable workmen on the project and to comply with the Employment and Social Development Canada's (ESDC) Labour Program, Federal Contractors Program. Inform the Departmental Representative of any labour situations that appear to require corrective action by PWGSC.
- The OTC shall ensure that a copy of the Agreement to Implement Employment Equity from signed by the DBO Contractor for the Contract is posted in a conspicuous place on site.

#### 6.3.7 Bylaw Compliance

NA

#### 6.3.8 Construction Safety

- All construction projects that are occupied by federal employees during construction are subject to the Canada Occupational Safety and Health Act and Regulations as administered by ESDC.
  - Fire safety provisions during construction must comply with FCC Standards 301 and 302.
  - In addition to the above, the DBO Contractor must comply with the provincial and municipal safety laws and regulations, and with any instructions issued by the officers of these authorities having jurisdiction relating to construction safety.
  - Notify the Departmental Representative of any health and safety violation by the DBO Contractor that the OTC becomes aware of.
-

### 6.3.9 Site Visits

- Provide non-resident construction inspection services only as required to provide oversight of the work.
- Provide services of qualified personnel who are fully knowledgeable with technical and administrative requirements of project.
- Establish a written understanding with the DBO Contractor as to what stages or aspect of the work are to be inspected prior to being covered up.
- Assess quality of work and identify in writing to the DBO Contractor and to the Departmental Representative, all defects and deficiencies observed at time of such inspections.
- Inspect materials and prefabricated assemblies and components at their source or assembly plant, as necessary for the progress of the project.
- Any direction, clarification or deficiency list shall be issued in writing to the Departmental Representative.
- Maintain a written record of site visit inspection reports.

### 6.3.10 Clarifications

Provide input on clarifications as required on Plans and Specifications or site conditions, as required in order that project not be delayed.

### 6.3.11 Progress Reports

Report to the Departmental Representative regularly on the progress of the work. Submit monthly progress reports and sign the Progress Claims.

### 6.3.12 Work Measurement

- If work is based on unit prices, measure and record the quantities for verification of monthly progress claims and the Final Certificate of Measurement.
- When Contemplated Change Notice is to be issued based on Unit Prices, keep accurate account of the work. Record dimensions and quantities.

### 6.3.13 Detail Drawings

Review for PWGSC's information any additional detail drawings submitted by the DBO Contractor as and when required to properly clarify or interpret the contract documents.

### 6.3.14 Shop Drawings

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- Ensure that shop drawings are stamped: "Checked and Certified Correct for Construction" by the DBO Contractor and stamped: "reviewed" by the DBO Contractor's Engineer.
- Review shop drawings for conformance with the Indicative Design.

#### 6.3.15 Inspection and Testing

- Ensure all testing is detailed by the DBO Contractor within commissioning plan
- Review all test reports and take necessary action with the DBO Contractor when work fails to comply with contract.
- Immediately notify the Departmental Representative when tests fail to meet project requirements and when corrective work will affect schedule.

#### 6.3.16 Training

- Provide PWGSC with recommended list of training activities to be undertaken on equipment and systems (but not the plant operation, which is dealt with elsewhere).
- Ensure all training is detailed within the DBO Contractor's commissioning plan, including confirmatory documentation of training conducted and attendees.

#### 6.3.17 Construction Changes

- The OTC does not have authority to change the work or the price of the Contract.
- Changes which affect cost or design concept must be approved by PWGSC.
- Upon PWGSC approval obtain quotations from the DBO Contractor in detail . Review prices and forward promptly recommendations to the Departmental Representative.
- PWGSC will issue OTC-prepared Change Orders to the DBO Contractor.
- All changes, including those not affecting the cost of the project, will be covered by Change Orders.

#### 6.3.18 Contractor's Progress Claim

- Each month the DBO Contractor submits a progress claim for work and materials as required in the
  - Contract.
  - Review and sign designated forms and promptly forward claims to the Departmental Representative for processing.
  - Ensure the DBO Contractor submits the following with each progress claim:
-

- Updated schedule of the progress of the work.
- Photographs of the progress of the work.
- Review DBO Contractor's marked-up drawings required for record drawing preparation on a monthly basis and report to the Departmental Representative.

#### 6.3.19 Materials On Site

- The DBO Contractor may claim for payment of material on site but not incorporated in work.
- Detailed list of materials with supplier's invoice showing price of each item must accompany claim; OTC shall check and verify the list.

#### 6.3.20 Acceptance

Inform the Departmental Representative when satisfied that the project is substantially completed.

#### 6.3.21 Interim Inspection

- The OTC, PWGSC and CSC shall inspect the work and list all unacceptable and incomplete work on a designated form. Acceptance of the project from the DBO Contractor is subject to successful resolution of the deficiencies and uncompleted work listed and priced.
- The Contract shall include two interim inspections:
  - Construction of Works – Includes commissioning of WWTP to provide a fully functioning plant in accordance with the Contract. Acceptance of the construction works will be in accordance with the criteria developed by the OTC for this portion of the work.
  - Initial Operation and Maintenance, and Turnover/Training – For the 2 year period following issue of the Certificate of Substantial Performance for the Construction of Works during which the DBO Contractor fully operates and maintains the WWTP and adequately trains the Client Department operations personnel. Acceptance of the construction works will be in accordance with the criteria developed by the OTC for this portion of the work.

#### 6.3.22 Certificates of Substantial Performance

Two Certificates of Substantial Performance will be issued:

- Construction of Works – Includes commissioning of WWTP to provide a fully functioning plant in accordance with the Contract.
-

- Initial Operation and Turnover/Training – For the 2 year period following issue of the Certificate of Substantial Performance for the Construction of Works during which the DBO Contractor fully operates and maintains the WWTP and adequately trains the Client Department operations personnel.

#### 6.3.22.1 General Requirements for Certificates of Substantial Performance

- Payment requires completion and signing, by the parties concerned, of the following documents:
  - (Interim) Certificate of Substantial Performance
  - Cost Breakdown
  - Inspection and Acceptance
  - Statutory Declaration for Certificate of Substantial Performance
  - Workmen's Compensation Board Certificate.
- Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to PWGSC for processing.

#### 6.3.23 Building Occupation

- CSC personnel may only enter the facility after the date of issue of the first Certificate of Substantial Performance for construction of works.
- The DBO Contractor shall operate and maintain the WWTP for a 2 year period beginning on the date of issue of the Certificate of Substantial Performance of the construction of works.
- Upon issue of the second Certificate of Substantial Performance for Initial Operation and Turnover/Training, the DBO Contractor may cancel the Contract Insurance, and CSC assumes responsibility for:
  - Security of the work(s).
  - Fuel and utility charges.
  - Operation and use of the WWTP.
  - General maintenance and cleaning of the work(s).
  - Maintenance of the site.

#### 6.3.24 Operation and Maintenance Data Manual

WWTP Operation and Maintenance Data Manual: [4] sets of each volume produced by the DBO Contractor in accordance with the Contract shall be verified for completeness, relevance and format by the OTC and submitted to PWGSC prior to issue of the first Certificate of Substantial Performance for the construction of works. The DBO Contractor shall retain one copy of each volume for his record and use during the initial operation and turnover/training period.

#### 6.3.25 Instruction of Operating Personnel

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- Oversee and ensure that the CSC's operating personnel is properly instructed by the DBO Contractor on the operation of all services and systems using the final manuals as reference.
- DBO Contractor to provide training sessions, as required, on the subject of design intent and systems operations as recommended by the OTC. Utilize Systems operations manual for training sessions.

#### 6.3.26 Keys

Ensure that all keys and safe combinations are delivered to PWGSC and/or the Client Department as applicable.

#### 6.3.27 Final Inspection

Inform PWGSC when satisfied that all work under the contract has been completed, including the deficiency items. PWGSC arranges for a final inspection of the project. If everything is satisfactory final acceptance of the project will be granted.

#### 6.3.28 Certificate of Completion

- The final payment requires completion and signing, by the parties concerned, of the following documents:
  - Certificate of Completion
  - Cost Breakdown
  - Inspection and Acceptance
  - Statutory Declaration for Final Certificate of Completion
  - Workmen's Compensation Clearance Certificate
- Verify that all items are correctly stated and ensure that completed documents and any supporting documents are furnished to PWGSC for processing.

#### 6.3.29 Take-over

- The date of issue of the second (Interim) Certificate of Substantial Performance for initial operation and turnover/training and issue of the Certificate of Completion signifies commencement of the 12 month warranty period for work completed on the date of each certificate in accordance with the General Conditions of the Contract.
  - Provide PWGSC with original copy of the DBO Contractor's warranties for all materials and work covered by an extended warranty or guarantee, according to the conditions of the specifications. Verify their completeness and extent of coverage.
-

### 6.3.30 As-Built and Record Drawings and Specifications

- Following the take-over, obtain as-built marked-up hard copy from the DBO Contractor:
  - Ensure significant deviations in construction from the original Contract drawings, including changes shown on Post-Contract Drawings, changes resulting from Change Orders or from On Site Instructions, are indicated.
- Check and verify all as-built records for completeness and accuracy and submit to PWGSC.
- Review Record Drawings incorporating As-Built information into project drawings.
- Ensure DBO Contractor submits Record Drawings and Specifications in number and format required by the Contract within [8] weeks of final acceptance.
- Ensure a complete set of final, reviewed shop drawings is submitted by the DBO Contractor.

### 6.4 DELIVERABLES:

- Written compliance and progress reports from site visits
  - Review of additional detail drawings when required to clarify, interpret or supplement the Construction Documents
  - Project delay and recovery reports
  - Preparation of contemplated change notices and change orders
  - Review and sign-off of progress claims
  - Minutes of progress meetings
  - Review of shop drawings, submittals, quotations for additional work, as-built marked-up drawings
  - Interim and final inspections including deficiency reports for interim inspections
  - Commissioning compliance review report
  - Decommissioning report
  - Operations compliance review report
  - Training and turnover compliance review report
  - Warranty deficiency list
  - Report on Final Warranty Review
-

## **RS 7 COMMISSIONING, OPERATING AND TURNOVER/TRAINING**

The OTC shall oversee all commissioning activities undertaken by the DBO Contractor during the development, implementation and post construction stages of the project to ensure compliance with commissioning requirements.

The DBO Contractor will retain a third party commissioning agent. The OTC shall work with the DBO Contractor's commissioning team.

Throughout this stage, the OTC will work closely with the DBO Contractor to implement commissioning activities and ensure that useful, well integrated drawings, reports and manuals are prepared in compliance with Contract Documents.

The OTC shall monitor the operation of the WWTP by the DBO Contractor for the initial 2 year period following issue of the first Certificate of Substantial Performance for construction of works, for compliance with the operational requirements established for the Contract by the OTC.

The OTC shall monitor the turnover/training phase of the project managed by the DBO Contractor for compliance with the training requirements established for the Contract by the OTC. The second Certificate of Substantial Performance is contingent upon successful completion of this phase.

### **7.1 INTENT**

- To define the commissioning, acceptance criteria, operational and performance requirements of the WWTP.
- To ensure that appropriate start-up and checkout procedures are employed for components, subsystems, including meaningful documentation for and certification of Quality Control reports and techniques under normal operations.
- To document the operations, maintenance and management requirements, and ensure that these requirements are included in the WWTP O&M Manual.
- To ensure that the final product meets the specified requirements and that the plant successfully operates under all specified conditions and that the CSC operators are properly trained in plant operations and maintenance.
- To minimize the life-cycle operating and maintenance costs.

### **7.2 GENERAL**

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### **Scope and Activities:**

- Provide requirements for the commissioning, operations, maintenance, training and turnover of the plant.
  - Review the WWTP O&M Manual prepared by the DBO Contractor for compliance to requirements.
  - Carry out various checks and tests to determine if the new facilities function in accordance with the contract documents
  - Identify the DBO Contractor's commissioning, performance verification (PV) and testing responsibilities.
  - Monitor the performance verification (PV) activities, review the installation checklists and PV report forms, and ensure a detailed verification schedule is provided by the DBO Contractor. PV tests will be performed by the DBO Contractor. Maintain detailed commissioning development reports.
  - Ensure PV inspection forms are completed for all components, sub-systems, and systems, and the full WWTP performance, and a final performance verification report is submitted by the DBO Contractor's Commissioning Team.
  - Prepare the requirements for a training plan for the CSC's operating staff. The training plan will recognize both short-term and long term requirements and shall employ both hard copy and audio visual techniques. Provide a training and turnover compliance review report.
  - Conduct commissioning reviews of the DBO Contractor's design submissions.
  - Review the DBO Contractor's submittals applicable to systems being commissioned for compliance with the Indicative Design.
  - Verify that the WWTP operational performance and all ancillary building systems (including mechanical, electrical, building envelope, etc.) meet the Indicative Design during the 2 year period that the DBO Contractor operates and maintains the plant. This includes conducting site reviews and verifying installation and functional performance, and witnessing operations and testing for a select portion of the systems. The treatment system requires 100% verification. Provide an operational compliance review report.
  - Review the operations and maintenance manuals for all ancillary building systems to ensure they provide the operating staff with all the information required to understand and optimally operate the building's systems.
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- Complete a summary commissioning review compliance report.
- Review the operation of the facility with the Client Department's operating staff within 10 months after issue of the second Certificate of Substantial Performance. A plan for resolving outstanding commissioning-related issues must be included.

## **RS8 DECOMMISSIONING**

Ensure that those components and associated operations of the existing WWTP that are not retained in the new WWTP are decommissioned in accordance with the requirements.

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Solicitation No. - N° de l'invitation  
EZ899-161301/A

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur  
tpv028

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

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**REAL PROPERTY CONTRACTING  
Public Works & Government Services Canada  
Room 219 - 800 Burrard Street  
Vancouver, B.C. V6Z 0B9**

**Requisition No.:** EZ899-161301/A  
**Tender Closing Date & Time:** **January 7, 2016 @ 2:00pm P.S.T.**  
**Project Description:** Technical Consultant – Wastewater Treatment Plant Upgrade  
Kent and Mountain Institutions, BC

**TECHNICAL BID**

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