



Lulu Island Dike Master Plan Phase 1 – Contract 4611P

1. Introduction

The City of Richmond (the “City”) proposes to engage the services of a Civil Engineering Consultant (the “Consultant”) to provide dike master planning services.

The objective of this request for proposal is to provide the City with qualified proponents capable of carrying out the work herein defined. The subsequent Proponent Submissions will form the basis for evaluation, interview and selection.

2. Definitions

2.1 Throughout this Request for Proposal the following definitions apply:

- a) “BC Bid” means the electronic tendering service maintained by the Province of British Columbia located online at www.bcbid.ca, or any replacement website;
- b) “City’s Designated Representatives” means the City’s employees or representatives who are authorized in writing to deal with the Consultant on behalf of the City in connection with the goods, materials, equipment and services or to make decisions in connection with the Contract;
- c) “City” means the municipal corporation, generally known as the City of Richmond, British Columbia.
- d) “Closing Time” means the closing date, time, and place as set out in subsection 3.1 of this RFP;
- e) “Consultant” means the Successful Proponent, individual, partnership, corporation or combination thereof, including joint venturers to this Request for Proposal who is awarded and enters into a written Contract with the City to perform and to oversee the Work;
- f) “Contract Documents” means the purchase order, the Consultant’s Proposal, the RFP and such other documents as listed in the purchase order, including all amendments or addenda agreed between the parties;

- g) “Contract” or “Agreement” means the agreement formed between the City and the Consultant as resulting from this Request for Proposal, executed by the City and the Consultant and evidenced by the purchase order issued to the Consultant by the City;
- h) “Delivery Date” means the date the City requires the Consultant to deliver the goods to the City’s Delivery Site;
- i) “HST” means the harmonized sales tax administered under the Excise Tax Act (Canada) and any successor tax or levy therefor in force from time-to-time;
- j) “Lead Proponent” is the Proponent whose Proposal, as determined through the evaluation criteria described in this RFP, provides the best overall value in meeting the requirements of the RFP, and with whom a Contract will be considered;
- k) “Proponent” means an individual partnership, corporation or combination thereof, including joint venturers or a company that submits, or intends to submit, a Proposal in response to this Request for Proposal;
- l) “Proposal” or “Submission” means a proposal submitted by a Proponent in response to this Request For Proposal;
- m) “RFP” or “Request for Proposals” means this request for proposals, inclusive of all appendices and any addenda that may be issued by the City;
- n) “Successful Proponent” means the same as “Consultant” and
- o) “Work” or “Works” means the provision of all labour, services, materials, equipment, and any other necessary items and actions for the Successful Proponent to complete and perform its obligations in accordance with the Requirements and terms and conditions of the Contract.

3. Submission Details

- 3.1 Three (3) copies of proposals marked “**Lulu Island Dike Master Plan Phase 1 - Contract 4611P**” addressed to the Purchasing Section, will be received at the Information Counter, Main Floor, Richmond City Hall, 6911 No. 3 Road, Richmond BC V6Y 2C1, until **12:00pm, local time on Thursday, January 12, 2012**. Submissions received after this time will be returned to the sender.

4. Pre-Bid Meeting

- 4.1 A Pre-Bid Meeting will be held:

Date: Thursday, December 8th, 2011

Time: 2:00pm – 4:00pm, local time

Location: M 2.002 Meeting House, Richmond City Hall, 6911 No. 3 Road

This meeting is not mandatory but the City strongly encourages Proponents to attend this meeting.

4.2 **Additional Meetings**

A separate meeting that follows the pre-bid meeting will be available to Proponents on an individual basis. Interested Proponents should send a written request to the contact person identified in section 5.1 no later than 4:00 pm, local time on Friday December 9th, 2011.

Note that meeting times will not be available between December 15th, 2011 and Jan 3rd, 2012.

5. **Enquiries**

5.1 Clarification of terms and conditions of the proposal process shall be directed to:

Purchasing

Kerry Gillis

Buyer II - Contracting Specialist

E-mail: purchasing@richmond.ca

Purchasing Section

City of Richmond

5.2 Enquiries will be received up to 5:00 pm, local time on Monday, December 12th, 2011.

5.3 The City, its agents and employees shall not be responsible for any information given by way of oral or verbal communication.

5.4 The City will only respond to questions that are submitted in writing. Any questions that are received and answered by City of Richmond Staff that affect the Proposal Process, any interpretation of, additions to, deletions from, or any other corrections to the Request for Proposal document, may be issued as written addenda by the City of Richmond. It is the sole responsibility of the potential Proponents to check with the following websites to ensure that all available information has been received prior to submitting a proposal:

a) City of Richmond: <http://www.richmond.ca/busdev/tenders.htm>

b) BC Bid: <http://www.bcbid.gov.bc.ca/open.dll/welcome?language=En>

6. Terms of this Request for Proposal

- 6.1 Proposals shall be open for acceptance for ninety (90) days following the submission closing date.
- 6.2 The City, at its sole discretion, may award components of the scope of work to more than one Proponent.
- 6.3 The City reserves the right to cancel this Request for Proposal for any reason without any liability to any Proponent or to waive irregularities at its own discretion.
- 6.4 Proposals may be withdrawn by written notice only provided such notice is received at the office of the City’s Purchasing Section prior to the date/time set as the closing time for receiving proposals.
- 6.5 Except as expressly and specifically permitted in these instructions, no Proponent shall have any claim for any compensation of any kind whatsoever, as a result of participating in the RFP, and by submitting a proposal each Proponent shall be deemed to have agreed that it has no claim.
- 6.6 Proponents are advised that the City will not necessarily accept any Proposal and the City reserves the right to reject any or all Proposals at any time without further explanation or to accept any Proposal considered advantageous to the City. Notwithstanding any other provision in this RFP document, the City has in its sole discretion, the unfettered right to:
- a) accept any Proposal;
 - b) reject any Proposal;
 - c) reject all Proposals;
 - d) accept a Proposal which is not the lowest cost Proposal;
 - e) accept a Proposal that deviates from the requirements, specifications, scope of work or the terms and conditions specified in this Proposal;
 - f) reject a Proposal even if it is the only Proposal received by the City;
 - g) accept all or any part of a Proposal; and
 - h) award all or any part of the Work to one or multiple Proponents.
- 6.7 The City may choose, at its sole discretion, to proceed with all of the components of the Work, none of the components or selected components of the Work.

- 6.8 A Proposal which contains an error, omission, or misstatement, which contains qualifying conditions, which does not fully address all the requirements of this RFP, or which otherwise fails to conform to the requirements in this RFP may be rejected in whole or in part by the City at its sole discretion.
- 6.9 The City may waive any non-compliance with the RFP, specifications, or any conditions of the RFP and may, at its sole discretion, elect to retain for consideration Proposals which are non-conforming, which do not contain the content or form required by the RFP or because they have not complied with the process for submission set out herein.
- 6.10 All Proposals will remain confidential, subject to the *Freedom of Information and Protection of Privacy Act* of British Columbia.

7. Negotiations

- 7.1 The award of the contract is subject to negotiations with the Lead Proponent. Such negotiations include, but are not limited to, the following:
- a) changes or work refinements in the service requirements or scope of work proposed by the Lead Proponent;
 - b) price – if directly related to a change or refinement in the proposed scope of work proposed by the Lead Proponent and
 - c) specific contract details as deemed reasonable for negotiation by the City of Richmond.
- 7.2 If a written contract cannot be negotiated within sixty (60) days of notification to the Lead Proponent, the City may, at its discretion at any time thereafter, terminate negotiations with the Lead Proponent and either enter into negotiations with the next qualified Proponent or cancel the RFP process and not enter into a contract with any Proponent.

8. Project Background

- 8.1 Lulu Island is surrounded by a 49km dike that protects it from river and sea flooding. The dike's current alignment and elevation have served the City well. However, climate induced sea level rise, a developing waterfront and related issues have prompted the City to further review medium and long term planning needs. To address such issues, the City has produced a number reports that relate to dikes (see section 12).
- 8.2 The City's most comprehensive dike planning report to date is the 2008 – 2031 Richmond Flood Protection Strategy, which is primarily a framework for addressing flood protection and policy requirements. The strategy recognises a

number of dike planning issues, such as sea level rise and land subsidence. However, the strategy provides a limited amount of detail on these topics or recommends future study. Other reports partially address topics such as seismic issues and dike upgrade schedules. However, the City now requires a report that addresses specific dike issues, in detail, for land development and engineering decision making purposes.

- 8.3 Ultimately the City requires a Dike Master Plan for all lands that require flood protection. However, this study will focus on meeting the short and medium needs of the Steveston area, considering wave dissipation techniques that may be suitable for the West Dike, and determining what implications the new BC Provincial Seismic Design Guidelines have on Richmond's Dike system.
- 8.4 Upgrading dikes in the Steveston area (Garry Point to London Farm, approximately 3km) presents many challenges that make it a planning priority. Reasons for this include:
- a) The current dike is incorporated into existing roadways adjacent to urban development. Transitioning from an elevated dike into low lying areas is technically and aesthetically challenging;
 - b) Significant heritage value exists. Residents and business owners are committed to conserving the area's look and feel;
 - c) A significant catalogue of historic structures are on or near the dike;
 - d) The area includes a functioning harbour and thriving board walk;
 - e) The Federal government own and operate large areas of land on or adjacent to the dike;
 - f) The Fraser River has red and yellow designated habitat throughout Steveston Harbour; and
 - g) There is significant pressure from developers to identify medium term diking requirements.

9. Project Scope

- 9.1 The maximum budget for the Dike Master Plan is \$200,000.00 (CAD).
- 9.2 The first phase of the Dike Master Plan will include the following key tasks (detailed in Section 10):
- a) Identify dike upgrade options for the Steveston area that include public consultation.

- b) Investigate wave dissipation options for the West Dike and other areas where significant wave action may occur.
 - c) Determine what implications the Provincial Seismic Design Guidelines for Dikes has in Richmond.
- 9.3 No exploratory type data shall be included in this project (e.g. elevation surveys, boreholes and tests pits). Currently available data includes 49km of dike elevation survey (25m spacing, completed in 2010) and borehole logs from pump station construction/upgrades (No. 4 Rd. North, Cambie St. West, Francis Rd. West, Williams Rd. West, No. 3 Rd. South, and Horseshoe Slough).

10. Consultant Duties

The Consultant shall dedicate an experienced and efficient team capable of undertaking a variety of project tasks that include, but is not limited to, the following:

- 10.1 Identify dike upgrade options for the Steveston area that include public consultation.
- a) Create a number of dike raising options between Garry Point and London Farm assuming a minimum 4.7m crest elevation.
 - b) Solicit comments from major stakeholders such as Fisheries and Oceans Canada, Environment Canada, BC Ministry of Environment, Port Metro Vancouver, Steveston Harbour Authority the Provincial Dike Inspector for each option.
 - c) Create Class D cost estimates for each option that account for all costs (e.g. land purchase, statutory right of way acquisition and environmental compensation should be included).
 - d) Establish pros and cons for each option.
 - e) Include two rounds of public consultation and incorporate feedback in the designs and the final report.
 - f) Recommend a preferred diking solution.
- 10.2 Investigate wave dissipation options for the West Dike and other areas where significant wave action may occur.
- a) Provide concepts and discuss wave mitigation options that could be implemented along the West Dike or Sturgeon Banks that will increase the existing dikes effectiveness and minimise future upgrade requirements.

- b) Provide concepts and discuss wave mitigation options that could be implemented in other areas other than the West Dike that will increase the existing dikes effectiveness and minimise future upgrade requirements.
 - c) Create Class D cost estimates for each option discussed.
- 10.3 Determine what implications the new BC Provincial Seismic Design Guidelines have on Richmond's Dike.
- a) Assess seismic upgrade requirements at three locations on Lulu Island's Perimeter Dike and provide a Class D cost estimate for each.
 - b) Describe how a subsurface parking structure attached to a large building/development is likely to interact with the dike during a seismic event, how such structures affect the risk of a dike breach and how they may alter dike seismic upgrade requirements.
 - c) From a dike breach perspective, describe the pros and cons between scenario i and ii:
 - i) Raise the dike by a small amount and seismically upgrade.
 - ii) Raise the dike a significant amount without seismic upgrades, (i.e., will the additional height lead to an acceptable post-earthquake crest elevation).
- 10.4 Reporting
- a) Produce draft and final reports to document all work.
- 10.5 Meetings
- a) In addition to public consultation, the consultant shall schedule start-up, review and other meetings with City staff to include staff input and complete the work program.

11. Project Submissions/Deliverables

- 11.1 The Consultant will be required to prepare and submit the following deliverables to the City as part of the Work:
- a) A Lulu Island Dike Master Plan (report) that covers all topics addressed in Section 10. This report should clearly state assumptions and show how numerical values were calculated. This report should also be submitted to the City in hard copy and original software formats.
 - b) Draft report submissions.

- c) Meeting minutes.

12. City Provided Items

12.1 Below is a list of dike and dike related reports available to the Consultant.

Year	Title
2010	Elevation survey (latest) The latest in a number of past crest elevation surveys. Approx. 49km surveyed at 25m intervals.
2009, Oct	Dike Assessment Memorandums (prepared by Delcan) <ol style="list-style-type: none"> 1. Condition Assessment of the CoR Perimeter Ring Dike - assessed crest height deficiencies. If below a certain height a dike is unlikely to meet current standards. 2. Prioritized List of Richmond Perimeter Ring Dike Improvement Projects - 36.6km below <i>current</i> Provincial Standard elevation. Prioritised 12 projects developed by the City for Emergency Management BC Flood Protection Grant Program. 3. Prioritization Framework for City of Richmond Perimeter Ring Dike Improvement Projects – ranks projects on technical, economical, environmental and social factors.
2009, June	Richmond Official Community Plan, Steveston Are, Bylaw 7100, Schedule 2.4
2009, Apr	Mid Island Scoping Report (prepared by Delcan) Concluded that solely upgrading the perimeter dike was more cost effective than adding a mid-island dike.
2009, Feb	2009 Waterfront Strategy
2009, Jan	Steveston Village Conservation Strategy (prepared by Birmingham & Wood)
2008, Nov	Fraser Wharves Ltd Vehicle Storage Facility Expansion, Fraser River Environmental Review Process (prepared by EBA)
2008, Sept	Flood Plain Designation and Protection Bylaw 8204 adopted
2008, June	2008 – 2031 Richmond Flood Protection Strategy (prepared by the City)

	An update to UMA's 2006 Strategy
2008, March	<p>Typical Cross Sections for River Dikes created (prepared by Golder)</p> <p>Created to help communicate City and Provincial dike requirements to stakeholders</p>
2007, Aug	<p>Concept Design River Road Dike (prepared by Golder)</p> <p>Three (3) dike alignment options were assessed to add a dike between No. 3 Road and Oak Street Bridge</p>
2007, March	<p>Richmond Dike Seismic Upgrade No. 4 to No. 5 Road South (prepared by EBA)</p> <p>A priority location for seismic upgrades due to thick loose deposits and its location, Option D, Full Dike raise to 4.5m which allows for a 1m crest elevation loss during a 1:475 year earthquake. This is not inline with the Provincial requirement to stabilize soil to prevent liquefaction.</p>
2006, June	<p>2006-2031 Flood Protection Management Strategy (prepared by UMA)</p> <p>An update to the 1989 Floodplain Management Implementation Strategy, Policy 7000. It identified flood protection issues and challenges, assessed flood potential, reviewed land use issues, reviewed dike solutions and provided a flood protection management strategy.</p>
2005 (?)	<p>Lidar data</p> <p>The City has in its possession and has permission to use Lidar data collected for the Fraser River Hydraulic Model. The nature of this data is unknown at this time.</p>
2004, Aug	<p>A Regional Overview of the Liquefaction Hazard Along the Richmond Dykes (prepared by UBC)</p> <p>Concluded that the area between No. 2 Road and No. 9 Road has the greatest hazard due to liquefaction, particularly between the Massey Tunnel and the Steveston Highway.</p>
2004, May	<p>Seismic Stability of the Sea Dykes at the Mariner's Village (prepared by UBC)</p> <p>1:500 yr event at 33rd percentile residual strength would likely produce a 0.37 to 0.39m crest settlement. Accurate cone penetration tests are important to estimate the hazard.</p>

2004, Oct	Elements for a Flood Management Strategy (prepared by UMA) Pre-cursor to the 2006 Flood Protection Management Strategy
2004, Oct	Cost Benefit Analysis of Alternative Dyke Routes [internal flood control barriers] (prepared by UMA) Reviews costs and benefits of interior dike options.
2004, Feb	South Dyke Rehabilitation Strategy No. 4 Road to No. 5 Road, Geotechnical Report (prepared by TROW)
2003, Sept	Richmond Flood Management Strategy, Technical Memos No. 2 (prepared by UMA) Reports on flood control options and dike breach modelling work completed.
2003, April	Richmond Flood Management Strategy, Technical Memos No. 1 (prepared by UMA) Provides an overview of the Hay & Co., summarise technical info pertaining to flood events Report, describes flood strategy concepts.
1999, Feb	West Dyke: Francis Road Stability Study, (prepared by UBC)
Date Unknown	Big Bend Dyke Earthquake Stability Research Project, River Road, Richmond, (prepared by UBC)
Date Unknown	Cyclic Shear Response of Channel Fill Fraser River Delta Silt, (prepared by UBC)

13. Project Schedule

13.1 The project is to be completed by Thursday April 26, 2012. A project schedule is to be submitted with the proposal outlining the major milestones and tasks. A final document complete with model files is required by the stated completion date.

14. Proposal Submissions

The submissions must include, but is not limited to, the following sections:

14.1 Project Understanding

The Consultant shall outline an approach to the undertaking of the project reflecting a clear understanding of the scope of work.

14.2 **Methodology**

The proposal shall describe in detail how the Consultant's Duties shall be completed. The Consultant shall include all corresponding fees for each of them.

14.3 **Schedule**

The project must be completed by Thursday April 26, 2012. If in the Consultant's opinion more time is required to achieve the specified objectives, this should be clearly indicated in the proposal.

The Consultant shall provide a preliminary schedule for all services to be provided and a summary of levels of effort of personnel, their rates, hours, and costs for each aspect of the project.

A statement of commitment to undertake the project and provide the staff with the necessary experience on time and on budget shall be included.

14.4 **Company Experience**

The Consultant shall describe the company involvement and relevant experience in similar projects and provide the list of projects completed in the past five years.

14.5 **Project Team**

The Consultant shall list the personnel and the related task they will be completing, including the project manager, who will be working on the project and provide resumes of previous experience for each of them, as well as a schedule of their hourly fees. A list of any sub-consultants with brief resume of relevant experience must be included.

The Consultant should also provide a minimum of three (3) client references from projects of a similar size and scope undertaken by key members of the project team.

14.6 **Fees**

The proposal shall include a summary of fees to provide the required services based on hourly rates for staff assigned to the project, broken down by the different phases of the work for each utility. The proposal shall include a maximum fee (upset price) for all services. All proposed fees shall be valid for a minimum of one calendar year.

15. Review of Proposals

- 15.1 The City will review the Proposals submitted to determine whether, in the City's opinion, Proponents have demonstrated the required experience and qualifications to fulfill the obligations of the services identified in this RFP.
- 15.2 The City, in its sole discretion and without having any duty or obligation to do so, may conduct any inquiries or investigations, including but not limited to contacting references, to verify the statements, documents, and information submitted in connection with the Proposal and may seek clarification from the Proponent's clients regarding any financial and experience issues.
- 15.3 Proposals shall be evaluated to determine the best value offered to the City against conformance to the following criteria:
- a) Understanding of project objectives/outcomes and vision;
 - b) Project Methodology;
 - c) Team Composition – Experience and Qualifications of those staff to be assigned to the project;
 - d) Company Experience;
 - e) Project Deliverables;
 - f) Value for Money, and
 - g) Project Timeline.
- 15.4 Proponents may be scheduled for an interview at the discretion of the City.

16. RFP Process

- 16.1 The City may unilaterally take the following actions, and shall not be liable for any such actions:
- a) amend the scope and description of the products and services to be procured as described in this RFP, and the qualifications that may be required to meet those requirements;
 - b) reject or accept any or all Submissions;
 - c) cancel the RFP process at any time and reject all submissions; or
 - d) cancel the RFP process and recommence in respect of the same RFP with the same or an amended set of documents, information and requirements.
- 16.2 The Proponent acknowledges and agrees that this RFP is in no way whatsoever an offer to enter into an agreement and submission of a Proposal by any Proponent

does not in any way whatsoever create a binding agreement. The Proponent acknowledges that the City has no contractual obligations whatsoever arising out of the RFP process.

17. Working Agreement

- 17.1 The Successful Proponent will enter into a contract for services with the City based upon the information contained in this request for proposal and the Successful Proponent's submission and any modifications thereto.
- 17.2 The Successful Proponent will enter into a slightly modified MMCD Consultants Agreement. MMCD documents may be purchased at:

Master Municipal Construction Documents Association
c/o Support Services Unlimited
102-211 Columbia Street
Vancouver, B.C. V6A 2R5
Phone: 604-681-0295
Fax: 604-681-4545

18. Award of Contract

- 18.1 Award of a Contract is contingent on funds being approved and the contract award being made by the appropriate City authority.
- 18.2 The purchase order, the Agreement, the Proposal, the RFP and such other documents including all amendments or addenda, shall form the basis for the Contract between the Consultant and the City. In the event of a conflict between any of the Contract Documents, the following documents will take precedence and govern over each other in the following order of priority from highest to lowest:
- a) The Agreement between the City and the Consultant;
 - b) The City's purchase order;
 - c) The Consultant's Proposal; and
 - d) The RFP and any subsequent addenda.
- 18.3 Where the head office of the successful Proponent is located within the City of Richmond and/or where the successful Proponent is required to perform the Service at a site located within the City of Richmond, the successful Proponent is required to have a valid City of Richmond business license prior to Contract execution.

18.4 The City is not under any obligation to award a Contract and may elect to terminate this RFP at anytime.

19. Publication of the Results of the Request for Proposal

19.1 The City will publish the name of the successful Proponent on the websites listed in section 5.4. No other notices will be issued by the City. Proponents shall visit these websites to obtain the results of this Request for Proposal.

20. Information Disclaimer

20.1 The City and its directors, officers, employees, agents, consultants and advisors are not liable or responsible for any verbal or written information, or any advice, or any errors or omissions, which may be contained in this RFP or otherwise provided to any Proponent pursuant to this RFP.

20.2 The Proponent shall conduct its own independent investigations and interpretations and shall not rely on the City with respect to information, advice, or documentation provided by the City. The information contained in this RFP is provisional and will be superseded by other agreement documents.

20.3 The City makes no representation, warranty, or undertaking of with respect to this RFP and the City and its directors, officers, employees, agents, consultants and advisors, shall not be liable or responsible for the accuracy or completeness of the information in this RFP or any other written or oral information made available to any interested person or its advisors, and any liability however arising, is expressly disclaimed by the City.