



**THE CITY OF WINNIPEG**

# **REQUEST FOR PROPOSAL**

**RFP NO. 142-2012**

**REQUEST FOR PROPOSAL FOR PROFESSIONAL ENGINEERING CONSULTING  
SERVICES FOR AN UNDERPASS OF THE CNR REDDITT SUBDIVISION AT PLESSIS  
ROAD AND ASSOCIATED WORKS**

**Proposals shall be submitted to:**

**The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1**

## TABLE OF CONTENTS

### PART A - PROPOSAL SUBMISSION

Form A: Proposal	1
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### PART B - BIDDING PROCEDURES

B1. Contract Title	1
B2. Submission Deadline	1
B3. Enquiries	1
B4. Confidentiality	1
B5. Addenda	2
B6. Proposal Submission	2
B7. Proposal (Section A)	3
B8. Fees (Section B)	3
B9. Management Proposal (Section C)	4
B10. Technical Proposal (Section D)	5
B11. Project Schedule (Section E)	6
B12. Qualification	6
B13. Opening of Proposals and Release of Information	7
B14. Irrevocable Offer	7
B15. Withdrawal of Offers	7
B16. Interviews	7
B17. Negotiations	8
B18. Evaluation of Proposals	8
B19. Award of Contract	9

### PART C - GENERAL CONDITIONS

C0. General Conditions	1
------------------------	---

### PART D - SUPPLEMENTAL CONDITIONS

#### General

D1. General Conditions	1
D2. Project Manager	1
D3. Background	1
D4. Scope of Services	2
D5. Project Planning and Preliminary Design	2
D6. Detailed Design	5
D7. Contract Administration	6
D8. Post-Construction	7
D9. Work by others	8
D10. Building Canada Fund Conditions	8

#### Submissions Prior to Start of Services

D11. Authority to Carry on Business	9
D12. Insurance	9
D13. Security Clearance	11
D14. Safe Work Plan	11

#### Schedule of Services

D15. Commencement	11
D16. Critical Stages	12
D17. Invoices	12

### PART E - SPECIFICATIONS

#### Additional Requirements

E1. As-Built Drawing Requirements	1
E2. Geotechnical Sampling and Analyses	2
E3. Sewer Televising Guidelines	3
E4. Pump House Design Elements	3

E5. Specifications for Structures	4
<b>Appendix A – Definition of Professional Consultant Services – Engineering</b>	
<b>Appendix B – References and Attachments</b>	
<b>Appendix C – Aecom’s Land Drainage Proposal</b>	
<b>Appendix D – Reference Drawings</b>	
<b>Appendix E – Pump House Example</b>	
<b>Appendix F – Sample Spreadsheet</b>	

## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 REQUEST FOR PROPOSAL FOR PROFESSIONAL ENGINEERING CONSULTING SERVICES FOR AN UNDERPASS OF THE CNR REDDITT SUBDIVISION AT PLESSIS ROAD AND ASSOCIATED WORKS

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, May 11, 2012.

B2.2 Proposals determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Project Manager or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. ENQUIRIES**

B3.1 All enquiries shall be directed to the Project Manager identified in D2.

B3.2 If the Proponent finds errors, discrepancies or omissions in the Request for Proposal (RFP), or is unsure of the meaning or intent of any provision therein, the Proponent shall promptly notify the Project Manager of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.

B3.3 If the Proponent is unsure of the meaning or intent of any provision therein, the Proponent should request clarification as to the meaning or intent prior to the Submission Deadline.

B3.4 Responses to enquiries which, in the sole judgment of the Project Manager, require a correction to or a clarification of the RFP will be provided by the Project Manager to all Proponents by issuing an addendum.

B3.5 Responses to enquiries which, in the sole judgment of the Project Manager, do not require a correction to or a clarification of the RFP will be provided by the Project Manager only to the Proponent who made the enquiry.

B3.6 The Proponent shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Project Manager in writing.

### **B4. CONFIDENTIALITY**

B4.1 Information provided to a Proponent by the City or acquired by a Proponent by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Project Manager. The use and disclosure of the confidential information shall not apply to information which:

- (a) was known to the Proponent before receipt hereof; or
- (b) becomes publicly known other than through the Proponent; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B4.2 The Proponent shall not make any statement of fact or opinion regarding any aspect of the Request for Proposals to the media or any member of the public without the prior written authorization of the Project Manager.

## **B5. ADDENDA**

- B5.1 The Project Manager may, at any time prior to the Submission Deadline, issue Addenda correcting errors, discrepancies or omissions in the Request for Proposal, or clarifying the meaning or intent of any provision therein.
- B5.2 The Project Manager will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B5.2.2 The Bidder is responsible for ensuring that it has received all Addenda and is advised to check the Materials Management Division website for Addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 9 of Form A: Proposal. Failure to acknowledge receipt of an addendum may render a Proposal non-responsive.

## **B6. PROPOSAL SUBMISSION**

- B6.1 The Proposal shall consist of the following components:
- (a) Form A: Proposal (Section A) in accordance with B7;
  - (b) Fees (Section B) in accordance with B8;
- B6.2 The Proposal should also consist of the following components:
- (a) Management Proposal (Section C) in accordance with B9;
  - (b) Technical Proposal (Section D), in accordance with B10;
  - (c) Project Schedule (Section E) in accordance with B11;
- B6.3 Further to B6.1, all components of the Proposal shall be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.
- B6.4 Further to B6.2, all components of the Proposal should be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.
- B6.5 Proponents should submit one (1) unbound 8.5" x 11" original (marked "original") including drawings and six (6) copies (copies can be in any size format).
- B6.6 The Proposal should be presented in the Sections identified in B6.1 and B6.2 above. Proponents are encouraged to use their creativity to submit a Proposal which provides the requested information for evaluation and other information which illustrates the strength of their team.
- B6.7 Further to B6.6, the Proposal shall be no more than 30 pages, exclusive of the required forms. Failure to adhere to the page limitation may render the Proposal non-responsive. Only the first 30 pages of the Proposal will be evaluated. Anything included as an appendix will not be evaluated.
- B6.8 Proponents are advised that inclusion of terms and conditions inconsistent with the Request for Proposal, will be evaluated in accordance with B18.1(a).
- B6.9 The Proposal shall be submitted enclosed and sealed in an envelope/package clearly marked with the RFP number and the Proponent's name and address.

- B6.10 Proposals submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B6.11 Proposals shall be submitted to:  
The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1
- B6.12 Any cost or expense incurred by the Proponent that is associated with the preparation of the Proposal shall be borne solely by the Proponent.

**B7. PROPOSAL (SECTION A)**

- B7.1 The Proponent shall complete Form A: Proposal, making all required entries.
- B7.2 Paragraph 2 of Form A: Proposal shall be completed in accordance with the following requirements:
- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
  - (b) if the Proponent is a partnership, the full name of the partnership shall be inserted;
  - (c) if the Proponent is a corporation, the full name of the corporation shall be inserted;
  - (d) if the Proponent is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B7.2.1 If a Proposal is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.
- B7.3 In Paragraph 3 of Form A: Proposal, the Proponent shall identify a contact person who is authorized to represent the Proponent for purposes of the Proposal.
- B7.4 Paragraph 11 of Form A: Proposal shall be signed in accordance with the following requirements:
- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, it shall be signed by the Proponent;
  - (b) if the Proponent is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
  - (c) if the Proponent is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
  - (d) if the Proponent is carrying on business under a name other than its own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B7.4.1 The name and official capacity of all individuals signing Form A: Proposal should be printed below such signatures.
- B7.5 If a Proposal is submitted jointly by two or more persons, the word "Proponent" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Proponents in the Proposal and the Contract, when awarded, shall be both joint and several.

**B8. FEES (SECTION B)**

- B8.1 The Proposal shall include a Fixed Fee for D5 Project Planning and Preliminary Design.

- B8.2 Commencing prior to the completion of Project Planning and Preliminary Design, fees for D6 Detailed Design, D7 Contract Administration, and D8 Post-Construction will be negotiated with the successful proponent at key stages.
- B8.3 Adjustments to Fees will only be considered based on increases or decreases to the Scope of Services.
- B8.3.1 The City will not consider an adjustment to the Fees based on changes in the Project budget or the Final Total Construction Cost.
- B8.4 Notwithstanding C1.1(b), Fees shall include costs for out of town travel, related meals and accommodations for the duration of the project and shall not be considered an Allowable Disbursement.
- B8.5 The Fees shall include an allowance of up to 8% for Allowable Disbursements as defined in C1.1(b), but shall exclude the costs included in B8.4. No other disbursements will be permitted.
- B8.6 The Fees shall include an allowance for other project costs for subconsultants and/or services such as materials testing, geotechnical sampling and analyses, and/or Underground Structures drawing acquisitions.
- B8.6.1 Further to D17.2(c)(ii), Fees may include an allowance of up to 5% for handling charges.
- B8.6.2 Further to B8.6, the Proposal should include a description of the assumed other project costs.
- B8.7 Notwithstanding C10.1, Fees submitted shall not include the Goods and Services Tax (GST) or Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B8.8 Payments to Non-Resident Consultants are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B9. MANAGEMENT PROPOSAL (SECTION C)**

- B9.1 Experience of Proponent and Subconsultant firms:
- (a) Proposals should describe the Proponent's experience, including:
- (i) general firm profile information, including years in business, average volume of work, number of employees and other pertinent information for the Proponent and all Subconsultants;
  - (ii) details demonstrating the history and experience of the Proponent and Subconsultants in providing; design, management of construction and contract administration services on projects of similar size and complexity.
  - (iii) details demonstrating the Proponent's and Subconsultant(s)' experience relating to the Scope of Services identified for this project;
- B9.2 Experience and qualifications of key personnel assigned to the Project:
- (a) Proposals should include, in tabular form:
- (i) Names of key personnel assigned to all phases of the Project, who shall not be substituted without written permission from the Project Manager;
  - (ii) The experience and qualifications of the key personnel assigned to the Project, including:
    - ◆ Job title;
    - ◆ Educational background and degrees;
    - ◆ Professional affiliation;
    - ◆ Years of experience on projects administered for the City of Winnipeg;
    - ◆ Years of experience in current position; and
    - ◆ Years of experience in design and construction administration.

- (b) Roles of each of the key personnel in the Project should be identified in an organizational chart;
- (c) For each person identified, list the percentage of their time to be dedicated to the Project. Provide this information for each of the phases identified in D4 Scope of Services
- (d) Proposals should include, for each person identified in B9.2(a)(i), a list of at least two projects comparable in complexity in which the person listed did comparable work and played a comparable role. Provide the following:
  - (i) Description of the project;
  - (ii) Role of the person;
  - (iii) Project owner;
- (e) Further to B9.2(d), and upon request of the Project Manager, the Proponent must be able to provide, for each person identified in B9.2(a)(i), two current references, including telephone numbers, for each project listed.

B9.3 Proponent's project management approach:

- (a) Proposals should include a methodology describing the Proponent's project management approach and team organization during the performance of Services, so that the evaluation committee has a clear understanding of the methods the Proponent will use in the delivery of the project:
  - (i) Describe the job function for each person and group of people so identified;
  - (ii) For Project Planning and Preliminary Design, provide time estimates by work activity and in total, including hourly rates, for each person identified in B9.2(a)(i). For the other Services, provide hourly rates for each person identified in B9.2(a)(i).

B9.4 A sample spreadsheet is included in Appendix F to assist in providing information requested in Management Proposal (Section C).

## **B10. TECHNICAL PROPOSAL (SECTION D)**

B10.1 Proposals should address the technical deliverables and associated task requirements required by the Scope of Services. It should clearly identify and explain work activities and identify all assumptions and interpretations.

B10.2 Specifically, Proposals should describe:

- (a) The Proponent's practical understanding of the Project, specifically:
  - (i) The team's understanding of the broad functional and technical requirements;
  - (ii) The team's understanding of the urban design issues;
- (b) the Proponent's technical approach and methodology to complete the services;
- (c) the collaborate process/method to be used by the key design professionals of the team in the various design phases of the Project;
- (d) any innovation to be used to perform the Scope of Services identified;
- (e) all activities and services to be provided by the City;
- (f) the deliverable(s) of the project;
- (g) any assumptions made with respect to the deliverable and Scope of Services;

B10.3 Methodology should be presented in accordance with the Scope of Service phases as defined in D4, as well as in PART E – SPECIFICATIONS and Appendix A – Definition of Professional Consulting Services – Engineering.

B10.4 Details of the Scope of Services are provided in D3 to D8.



## **B11. PROJECT SCHEDULE (SECTION E)**

- B11.1 Proponents should present a carefully considered Critical Path Method schedule using Microsoft Project or similar project management software, complete with durations (monthly timescale) and milestone dates or events. The schedule should address each requirement of the Scope of Services.
- B11.2 The Proponent's schedule should include critical dates for review and approval processes by the City and other organizations anticipated during the design and tendering phases of the Project. Reasonable times must be allowed for completion of these processes.

## **B12. QUALIFICATION**

- B12.1 The Proponent shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Proponent does not carry on business in Manitoba, in the jurisdiction where the Proponent does carry on business; and
  - (b) be financially capable of carrying out the terms of the Contract;
  - (c) have all the necessary experience, capital, organization, and equipment to perform the Services in strict accordance with the terms and provisions of the Contract;
  - (d) have or establish and staff an office in Winnipeg for the duration of the Project.
- B12.2 The Proponent and any proposed Subconsultant (for the portion of the Services proposed to be subcontracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>
- B12.3 The Proponent and/or any proposed Subconsultant (for the portion of the Services proposed to be subcontracted to them) shall:
- (a) have successfully carried out services for the programming; design, management of construction and contract administration for architectural and/or engineering projects of similar complexity, scope and value; and to those required for this Project; and
  - (b) be fully capable of performing the Services required to be in strict accordance with the terms and provisions of the Contract; and
  - (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba);
  - (d) have the knowledge and resources to administer the requirements of The Workplace Safety and Health Act (Manitoba) during the construction works associated with this Contract; and
  - (e) undertake to meet all licensing and regulatory requirements of the appropriate governing authorities and associations in the Province of Manitoba.
- B12.4 The Proponent shall submit, within three (3) Business Days of a request by the Project Manager, further proof satisfactory to the Project Manager of the qualifications of the Proponent and of any proposed Subconsultant.
- B12.5 The Proponent shall provide, on the request of the Project Manager, full access to any of the Proponent's equipment and facilities to confirm, to the Project Manager's satisfaction, that the Proponent's equipment and facilities are adequate to perform the Services.

### **B13. OPENING OF PROPOSALS AND RELEASE OF INFORMATION**

- B13.1 Proposals will not be opened publicly.
- B13.2 After award of Contract, the name(s) of the successful Proponent and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt>
- B13.3 To the extent permitted, the City shall treat all Proposal Submissions as confidential. However, the Proponent is advised that any information contained in any Proposal may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.
- B13.4 Following the award of Contract, a Proponent will be provided with information related to the evaluation of its submission upon written request to the Project Manager.

### **B14. IRREVOCABLE OFFER**

- B14.1 The Proposal(s) submitted by the Proponent shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.
- B14.2 The acceptance by the City of any Proposal shall not release the Proposals of the other responsive Proponents and these Proponents shall be bound by their offers on such Services until a Contract for the Services has been duly executed as herein provided, but any offer shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 10 of Form A: Proposal.

### **B15. WITHDRAWAL OF OFFERS**

- B15.1 A Proponent may withdraw its Proposal without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B15.1.1 The time and date of receipt of any notice withdrawing a Proposal shall be the time and date of receipt as determined by the Manager of Materials.
- B15.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Proposal or the Proponent's authorized representatives named in Paragraph 11 of Form A: Proposal, and only such person, has authority to give notice of withdrawal.
- B15.1.3 If a Proponent gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Proposal until after the Submission Deadline has elapsed;
  - (b) open the Proposal to identify the contact person named in Paragraph 3 of Form A: Proposal and the Proponent's authorized representatives named in Paragraph 11 of Form A: Proposal; and
  - (c) if the notice has been given by any one of the persons specified in B15.1.3(b), declare the Proposal withdrawn.
- B15.2 A Proponent who withdraws its Proposal after the Submission Deadline but before its offer has been released or has lapsed as provided for in B14.2 shall be liable for such damages as are imposed upon the Proponent by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

### **B16. INTERVIEWS**

- B16.1 The Project Manager may, in his/her sole discretion, interview Proponents during the evaluation process.

## **B17. NEGOTIATIONS**

- B17.1 The City reserves the right to negotiate details of the Contract with any Proponent. Proponents are advised to present their best offer, not a starting point for negotiations in their Proposal Submission.
- B17.2 The City may negotiate with the Proponents submitting, in the City's opinion, the most advantageous Proposals. The City may enter into negotiations with one or more Proponents without being obligated to offer the same opportunity to any other Proponents. Negotiations may be concurrent and will involve each Proponent individually. The City shall incur no liability to any Proponent as a result of such negotiations.
- B17.3 If, in the course of negotiations pursuant to B17.2 or otherwise, the Proponent amends or modifies a Proposal after the Submission Deadline, the City may consider the amended Proposal as an alternative to the Proposal already submitted without releasing the Proponent from the Proposal as originally submitted.

## **B18. EVALUATION OF PROPOSALS**

- B18.1 Award of the Contract shall be based on the following evaluation criteria:
- |  |             |
|--|-------------|
| (a) compliance by the Proponent with the requirements of the Request for Proposal or acceptable deviation therefrom: | (pass/fail) |
| (b) qualifications of the Proponent and the Subconsultants, if any, pursuant to B12:                                 | (pass/fail) |
| (c) Project Planning and Preliminary Design Fees; (Section B)  | 20%         |
| (d) Management Proposal; (Section C)   | 50%         |
| (e) Technical Proposal; (Section D)  | 25%         |
| (f) Project Schedule (Section E)   | 5%          |
- B18.2 Further to B18.1(a), the Award Authority may reject a Proposal as being non-responsive if the Proposal Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Proposal, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.
- B18.3 Further to B18.1(b), the Award Authority shall reject any Proposal submitted by a Proponent who does not demonstrate, in its Proposal or in other information required to be submitted, that it is responsible and qualified.
- B18.4 Further to B18.1(c), Fees will be evaluated based on Fees submitted in accordance with B8.
- B18.5 Further to B18.1(d), the Management Proposal will be evaluated considering the experience of the Proponent's organization (firm) on projects of similar size and complexity, the experience and qualifications of the key personnel and Subconsultant personnel on projects of comparable complexity as well as the Proponent's project management approach and team organization.
- B18.6 Further to B18.1(e), the Technical Proposal will be evaluated considering the Proponent's demonstrated understanding of the Project's technical and functional requirements.
- B18.7 Further to B18.1(f), Project Schedule will be evaluated considering the Proponent's ability to comply with the requirements of the Project.
- B18.8 Notwithstanding B18.1(d) to B18.1(f), where Proponents fail to provide complete responses to B6.2(a) to B6.2(c), the score of zero will be assigned to the incomplete part of the response.

**B19. AWARD OF CONTRACT**

- B19.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.
- B19.2 The City will have no obligation to award a Contract to a Proponent, even though one or all of the Proponents are determined to be responsible and qualified, and the Proposals are determined to be responsive.
- B19.2.1 Without limiting the generality of B19.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Services;
  - (b) the prices are materially in excess of the prices received for similar services in the past;
  - (c) the prices are materially in excess of the City's cost to perform the Services, or a significant portion thereof, with its own forces;
  - (d) only one Proposal is received; or
  - (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.
- B19.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Proponent submitting the most advantageous offer.
- B19.4 The form of Contract with the City of Winnipeg will be based on the Contract as defined in C1.1(n).**
- B19.5 Following the award of Contract, a Proponent will be provided with information related to the evaluation of its Proposal upon written request to the Project Manager.
- B19.6 The City may, at its discretion, award the Contract in phases.
- B19.7 If, after the award of Contract, the Project is cancelled, the City reserves the right to terminate the Contract. The Consultant will be paid for all Services rendered up to time of termination.

## **PART C - GENERAL CONDITIONS**

### **C0. GENERAL CONDITIONS**

- C0.1 The *General Conditions for Consultant Services* (Revision 2010-10-01) are applicable to the Services of the Contract.
- C0.1.1 The *General Conditions for Consultant Services* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm).
- C0.2 A reference in the Request for Proposal to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Consultant Services*.

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

#### **D1. GENERAL CONDITIONS**

D1.1 In addition to the *General Conditions for Consultant Services*, and the *Definition of Professional Consultant Services – Engineering*, these Supplemental Conditions are applicable to the Services of the Contract.

#### **D2. PROJECT MANAGER**

D2.1 The Project Manager is:

Blake Kibbins, P. Eng.

Email: bkibbins@winnipeg.ca

Telephone No. (204) 451-3757

Facsimile No. (204) 986-5302

D2.2 All correspondence or contact by Proponents with the City in respect of this RFP must be directly and only with the City's Project Manager. Failure to restrict correspondence and contact to the Project Manager may result in the rejection of the Proponent's Proposal Submission.

D2.3 At the pre-commencement meeting, the Project Manager will identify additional personnel representing the Project Manager and their respective roles and responsibilities for the Services.

#### **D3. BACKGROUND**

The Federal and Provincial governments are contributing funds to the Plessis Road Underpass through the Building Canada Fund which was established under the 2007 Building Canada plan to fund projects from 2007 to 2014.

D3.2 The existing at-grade crossing of Plessis Road at the CNR Redditt Subdivision will be replaced with an underpass grade separation structure, including earth retaining structures, to provide improvements in road safety, mobility, and sustainability. The underpass shall be designed to accommodate four through lanes and auxiliary lanes where warranted. The pavement and bridge structure must support the addition of two through lanes in the future without modification to the bridge structure, retaining structures or embankment slopes.

D3.3 Geometric and capacity improvements on Plessis Road and Dugald Road are required. Plessis Road will be reconstructed between Pandora Avenue and approximately 325 m south of Dugald Road. This section of Plessis Road is part of the City of Winnipeg Strategic Road Network as identified in the Winnipeg Transportation Master Plan and will be widened to four lanes between Pandora Avenue and Dugald Road. Dugald Road is anticipated to be reconstructed from 600 m east to 350 m west of Plessis Road. The conceptual roadworks can be seen in Appendix D.

D3.4 Connections to the existing pedestrian and active transportation facilities on Pandora Avenue and Dugald Road will be provided on Plessis Road.

D3.5 Improvements to the existing land drainage system and provision of an underpass pumping facility are required. AECOM Canada Ltd. has been retained by the City of Winnipeg to provide a conceptual land drainage design report for the underpass project. The report will be provided to the successful Proponent. AECOM's proposal is provided in Appendix C.

D3.6 Construction of the underpass will require the relocation of several utilities, including but not limited to watermains, sewers, fibre optic cables, gas mains, distribution poles, street lights, and Manitoba Telecom Systems plant. A drawing showing the location of underground utilities is

provided in Appendix D. The drawing is for informational purposes only and the City of Winnipeg makes no claim or liability to the accuracy of the information therein.

- D3.7 Imperial Oil Limited and Shell Canada have pipelines and a valve station in the vicinity of the proposed underpass. The pipelines will need to be relocated or lowered and the valve station may require relocation. Information of these pipelines and the valve chamber is provided in Appendix D.
- D3.8 Temporary rail and road detours will be required to direct traffic around the construction. Disruption to CN Rail operations during construction will be minimized.
- D3.9 Construction is expected to be substantially completed in 2014.

#### **D4. SCOPE OF SERVICES**

- D4.1 The Services required under this Contract shall consist of the following:
  - (a) Project Planning and Preliminary Design as outlined in D5;
  - (b) Detailed Design as outlined in D6;
  - (c) Contract Administration as outlined in D7;
  - (d) Post Construction Services as outlined in D8.
- D4.2 Work shall commence immediately with Project Planning and Preliminary Design. The work plan and associated fees for subsequent phases will be negotiated at key stages.
- D4.3 The successful Proponent will coordinate their activities with (including but not limited to):
  - (a) Canadian National Railway
  - (b) Imperial Oil Limited
  - (c) Shell Canada
  - (d) All utilities, including but not limited to Manitoba Hydro and Manitoba Telecom Services
  - (e) City of Winnipeg (various departments)
  - (f) City of Winnipeg's Third Party Contract Administrator.

#### **D5. PROJECT PLANNING AND PRELIMINARY DESIGN**

- D5.1 Preliminary Design Services are defined in Appendix A.
- D5.2 Where applicable, road designs must address:
  - (a) Appropriate geometric standards set by the Transportation Association of Canada (TAC);
  - (b) City of Winnipeg's *Transportation Standards Manual* (February 1991);
  - (c) City of Winnipeg's *Accessibility Design Standards* (May 2010);
  - (d) City of Winnipeg's *Universal Design Policy* (October 16, 2001);
  - (e) City of Winnipeg's *Tree Planting Details and Specifications Downtown Area and Regional Streets* (May 2009);
  - (f) City of Winnipeg's *Tree Removal Guidelines*;
  - (g) The current edition of *The City of Winnipeg Standard Construction Specifications*;
  - (h) Transport Canada *Draft RTD 10 Road/Railway Grade Crossings* (October 2002)
  - (i) Transport Canada *Canadian Railway-Roadway Grade Crossings Standards*, latest edition
  - (j) Transport Canada *Railway-Roadway Grade Crossings Policy*, latest edition
- D5.3 Where applicable, bridge designs must address:
  - (a) AREMA *Manual for Railway Engineering*

- (b) CN Guidelines for Design of Railway Structures (January 2006)
- (c) CNR Temporary Shoring Guidelines (November 2011)
- (d) CAN/CSA-S6-06 Canadian Highway Bridge Design Code

D5.4 Where applicable, other structures must address:

- (a) Manitoba Building Code
- (b) *AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals*
- (c) AASHTO Roadside Design Guide, 4<sup>th</sup> Edition

D5.5 Preliminary Design Services shall include but not be limited to:

- (a) Confirming the scope of work required using professional engineering judgment;
- (b) Prepare a schedule of goals, objectives and activities (Project Schedule) for the entire project broken down to an acceptable, measurable level and provide comprehensive management of the project. Monitor and maintain the same in a manner acceptable to the City;
- (c) Review and incorporate regulatory requirements into project plan and schedule. Obtain approvals from appropriate regulatory agencies as necessary;
- (d) Collect relevant information from CN Rail, Shell Canada, Imperial Oil Limited, and all utilities, as well as review record drawings, reports, and other information that will be provided by the City, including but not limited to (all documents available at [www.winnipeg.ca](http://www.winnipeg.ca)):
  - (i) OurWinnipeg (adopted July 12, 2011);
  - (ii) OurWinnipeg Sustainable Transportation Strategy (adopted July 12, 2011);
  - (iii) Winnipeg Transportation Master Plan (adopted November 16, 2011);
  - (iv) Transcona Yards Industrial Neighbourhood Area Redevelopment Plan (November 2005)
- (e) Conduct surface and sub-surface site explorations, measurements, investigations and surveys needed as may be mutually agreed to by the City;
  - (i) Where additional site investigation services are required, engage the services of appropriate qualified Subconsultant personnel, including but not limited to: geotechnical sampling and analyses (E2), feedermain and forcemain loading assessments and materials testing;
- (f) Determine the extent of sewer CCTV inspections required and undertake the inspections in accordance with Public Works Sewer Televising Guidelines (E3). Fees associated with undertaking the inspections should not be included in the Proposal Submission but will be negotiated when the extent of CCTV inspections has been determined;
- (g) Develop a project Risk Management Plan identifying risks and appropriate mitigation strategies as they relate to the successful completion of the project. Tools developed by the City of Winnipeg Audit Department are available at <http://www.winnipeg.ca/audit/irm.stm>;
- (h) Participate in a value engineering exercise;
- (i) Undertake a pavement design analysis that recommends pavement structure and utilizes a life cycle cost analysis to determine the preferred option. Assumptions to the life cycle cost requirements will be reviewed by the City prior to analysis;
- (j) Conduct an environmental investigation to identify any site contamination issues that will need to be addressed during construction;
- (k) Conduct a screening in accordance with the Canadian Environmental Assessment Act;
- (l) Investigate and incorporate CN Rail requirements, seek and obtain necessary approvals and incorporate requirements into the design and project plan. Provide assistance and support to the City regarding any negotiations with the railway;



- (m) Review the land drainage design report assembled by AECOM and document any necessary modifications. Investigate land drainage requirements and undertake preliminary design of improvements to land drainage sewers and a new pumping station. A suggested design for the pump station from a previous City of Winnipeg project is provided in Appendix E. Pumping station design elements are provided in E4;
- (n) Identify required relocation of the Imperial Oil Limited and Shell Canada pipelines and related plant. It is anticipated that Imperial Oil Limited and Shell Canada will design and relocate their plant;
- (o) Identify required relocation of Manitoba Hydro and Manitoba Telecom Services' plant. It is anticipated that Manitoba Hydro and Manitoba Telecom Services will design and relocate their plant;
- (p) Document all design criteria by component, including but not limited to structures, roads, rail, drainage and utilities. Structures will be designed for a minimum service life of 75 years;
- (q) Identify property requirements and provide necessary information to the City to support the property acquisition process including drawings if necessary. Existing property information and anticipated property requirements are included in Appendix D;
- (r) Provide preliminary design information as required to the City of Winnipeg's Third Party Contract Administrator and work with the City's Third Party Contract Administrator to determine any design options or decision points before they are presented to the public for comment;
- (s) Attend and participate at open houses;
- (t) Conduct traffic operational studies:
  - (i) Determine the appropriate lane requirements;
  - (ii) Develop a traffic management plan considering vehicles, trucks, Winnipeg Transit, pedestrians, cyclists, access management and signal timings to provide an acceptable level of service during construction. Review the implications of closing Plessis Road south of Dugald Road during construction;
  - (iii) Develop an access management strategy for property access within the study area;
  - (iv) Analyses are to be conducted using Trafficware Ltd. software (Synchro and Simtraffic) and the resulting files are to be provided to the City of Winnipeg for review;
  - (v) Anticipated limits of the traffic study area are the intersections of Plessis Road and Pandora Avenue to the north, Dugald Road and Bournais Drive to the west, Plessis Road and Camiel Sys Street to the south, and Dugald Road and Ravenhurst Street to the east;
  - (vi) Existing traffic volumes and future traffic volumes considering the Winnipeg Transportation Master Plan will be provided by the City of Winnipeg. Traffic volumes during construction will be estimated using TransCAD Transportation Planning Software and will be provided by the City of Winnipeg;
  - (vii) Existing traffic signals timings will be provided by the City of Winnipeg.
- (u) Coordinate the intersection designs of Plessis Road with Dugald Road and Pandora Avenue with the City of Winnipeg Traffic Signals Branch;
- (v) Recommend overhead sign structure locations and review requirements with the City of Winnipeg. Sign size and identification will be supplied by the City;
- (w) Conduct a transportation noise study for residential properties within the project limits and recommend attenuation measures where warranted;
- (x) Recommend an appropriate posted speed limit for the facility based upon geometric and safety aspects of the proposed design, supported by speed studies to be conducted by the Public Works Department;
- (y) Development of project aesthetics including streetscaping, landscaping and structure architectural details;

- (z) Identify and incorporate stakeholder needs;
- (aa) Provision to the City of a complete current report on the project status on a monthly basis advising of progress, schedule, project costs, and Change in Services;
- (bb) Provide Project details and regular Project updates to the Envista right-of-way coordination system;
- (cc) Prepare a Response Report to those recommendations or suggestions in the Preliminary Design Safety Audit Report;
- (dd) Prepare preliminary design drawings and schedules in sufficient detail to produce Class 3 (expected accuracy between +30 and -20 percent) cost estimates;
- (ee) Prepare a Class 3 estimate of costs and cash flow consistent with the City's Capital Forecast;
- (ff) Prepare reports documenting the preliminary design process and recommended preliminary design. Six (6) hard copies shall be submitted along with an electronic PDF version properly bookmarked;
- (gg) Presentation of preliminary design information to the City's Project Steering Committee;
- (hh) Presentation of the preliminary design report to Standing Committees of City Council and Community Committee(s) supplying the necessary number of reports;
- (ii) Include any and all associated ancillary services required to successfully complete the preliminary design to the satisfaction of The City of Winnipeg;
- (jj) Generally, Preliminary Design consulting engineering services embodies all those activities required prior to commencement of detailed design.

## **D6. DETAILED DESIGN**

D6.1 Detailed Design Services are defined in Appendix A.

D6.2 Designs submitted for review must:

- (a) Be sealed by a Professional Engineer, registered in the Province of Manitoba;
- (b) Include a pavement design brief;
- (c) Include the pavement cross section;
- (d) Include the dimensioned jointing design (where applicable);
- (e) Include separate overall horizontal geometry layout drawings. Drawings should be at a 1:500 horizontal scale with control line data for various elements as required (based on northing and easting), appropriate spiral and curve data, control point data, layout of key pavement edges based on the alignments shall be done by station-offset methods (northing and easting layout will not be accepted), directional traffic arrows, lane widths, taper dimensions, storage lengths for acceleration and deceleration movements, and offset – radii information at all islands and median openings;
- (f) Include Department drawing numbers before the works are advertised. Drawing numbers can be requested from Mr. Gary Tront at (204) 471-7630;
- (g) Include construction staging drawings / figures;
- (h) Include all relevant plan and profile information;
- (i) Include landscaping and minor streetscaping aesthetics, detailed on separate drawings;
- (j) Include all design details, plan and profile for any noise mitigation measures;
- (k) Include overhead sign structure and roadside hazard protection details;
- (l) Include all structural drawings and details pertaining to the new underpass;
- (m) Include dewatering requirements for excavations;
- (n) Include miscellaneous details as required to better present the scope of the work to the Contractor;

- (o) Conform to the *Manual for the Production of Construction Drawings for the City of Winnipeg*, Works and Operations Division (November 1984);
- (p) Allow six weeks for circulation to Underground Structures
  - (i) Ensure that separate copies are sent to affected utilities, with requests for estimates where required if not already received;

D6.3 Bid Opportunity documents must be prepared:

- (a) Using the latest applicable template from the Materials Management Division;
- (b) Referencing the current edition of *The City of Winnipeg Standard Construction Specifications*.

D6.4 Detailed Design Services shall include but not be limited to:

- (a) Planning the construction contract activities and determining whether multiple construction contracts are warranted. CN Rail forces are not expected to construct the rail works, but will supply the rail. CN Rail will perform all grade crossing signals work and will engage a contractor directly;
- (b) Provide detailed design information to the Third Party Contract Administrator engaged directly by the City to conduct a safety audit;
- (c) Prepare a response to the recommendations or suggestions in the Safety Audit Report and make alterations to the design where agreed upon by the City;
- (d) Allow sufficient time for review by the City's Project Manager and additional personnel;
- (e) Preparation and submission of detailed engineering calculations, drawings, and design criteria used in the design in a timely manner for review to secure acceptance by the City;
- (f) Preparation of estimated capital costs and cash flow forecasts;
- (g) Coordinate work with and fulfill requirements of City of Winnipeg Geomatics Branch;
- (h) Monitor and update the project Risk Management Plan as required;
- (i) Presentation of design information to the City's Project Steering Committee;
- (j) Presentation of detailed design to Standing Committees of City Council and Community Committee(s), as required;
- (k) Submission of detailed monthly cost statements and projections for engineering services or any other items in a manner acceptable to the City. Incorporate the same into the Project Budget. Monitor and maintain the Project Schedule in a manner acceptable to the City;
- (l) Provision to the City of a complete current report on the project status on a monthly basis advising of progress, schedule, project costs, Change in Works and Change in Services;
- (m) Preparation of bid opportunity package(s);
- (n) Any and all associated ancillary services required to successfully complete the Detailed Design, up to the point where construction contracts are awarded, to the satisfaction of the City of Winnipeg;

## **D7. CONTRACT ADMINISTRATION**

D7.1 Contract Administration Services are defined in Appendix A and shall be conducted in accordance with the City of Winnipeg's *Manual of Project Administration Practice* (DRAFT March 1992 – See Appendix B - References).

D7.2 NON-RESIDENT Contract Administration Services shall include but not be limited to:

- (a) Ensure persons with demonstrated experience are assigned to administer the Project for the duration of the Project, with personnel changes only upon approval of the Project Manager;
- (b) Timely submittal of accurate progress payments and invoices;

- (c) Conducting pre-award and pre-construction meetings with formal notes in accordance with the City of Winnipeg's *Manual of Project Administration Practice* (DRAFT March 1992);
- (d) Provision to the City of a complete current report on the project status on a monthly basis advising of progress, schedule, project costs, Change in Services and Changes in Work;
- (e) Monitor and update the project Risk Management Plan as required;

D7.3 RESIDENT Contract Administration Services shall include but not be limited to:

- (a) Coordination of day-to-day Site activities;
- (b) Ensuring construction contractor conformance to the City of Winnipeg's *Manual of Temporary Traffic Control*;
- (c) Field and/or laboratory testing and verification of construction material quality;
- (d) Field measurement and verification of construction material quantities in a manner so as to minimize contract disputes;
- (e) Provision of periodic and timely updates to the Project Manager on progress and/or expenditures, through:
  - (i) Regular Site meetings with formal minutes as described in the City of Winnipeg's *Manual of Project Administration Practice* (DRAFT March 1992), including the date, location and attendees. Issues, updates and amendments must be itemized and dated;
  - (ii) Other formal and/or informal documented means;
- (f) Representation of the City to the local residents and businesses in a professional manner, with responsible and prompt reaction to reasonable requests (minimizing impact and/or disruption of the Project to the extent possible);
- (g) On-going updates to the lane-closure information line as required;
- (h) Supervision of Subconsultants required to perform any services under D5.5(e)(i);
- (i) Provision of Project details and regular Project updates to the Envista right-of-way coordination system;

**D8. POST-CONSTRUCTION**

D8.1 Post-Construction Services are defined in Appendix A.

D8.2 Post-Construction Services shall include but not be limited to:

- (a) Preparation of one of each of the following for every construction contract administered under the Project:
  - (i) Certificate of Substantial Performance;
  - (ii) Certificate of Total Performance; and
  - (iii) Certificate of Acceptance.
- (b) Commissioning of plant and the preparation of operating manuals as appropriate;
- (c) Additional Contract Administration for maintenance (pay) items within the warranty period of the construction contract;
- (d) Resolution of deficiencies and/or outstanding warranty issues;
- (e) Submission of a final construction report within three months of Substantial Performance of the latest construction contract, including:
  - (i) Summary report – a description of:
    - ◆ Services accomplished, including initial and final scope of Project;
    - ◆ Final pavement design
    - ◆ Issues encountered and resolutions achieved;
    - ◆ Any outstanding services or issue-resolutions required; and

- ◆ Final or projected final contract cost;
  - ◆ Daily field reports (as an appendix);
  - ◆ Field test reports (as an appendix).
- (ii) Photographs – good quality digital photos using descriptive file names (including year), provided on CD or DVD (notwithstanding pre-construction Site and property condition assessment photos, as per Appendix A – Definition of Professional Consultant Services – Engineering – Public Works)
- ◆ typical pre-construction photos
  - ◆ typical Post-construction photos
  - ◆ typical construction operation photos (e.g. concrete pour, paving operation).
- (iii) Provision of record drawings, where required, in accordance with As-Built Drawing Requirements(E1) within three months of Substantial Performance of each construction contract, unless waived or amended in writing by the Project Manager.

## **D9. WORK BY OTHERS**

- (a) AECOM Canada Ltd. has been retained by the City of Winnipeg to provide a conceptual land drainage design report for the Project;
- (b) The City of Winnipeg's Third Party Contract Administrator, who will be engaged under a future contract, will be required to:
- (i) Identify and prepare a profile of project stakeholders in the immediate area, as well as technical stakeholders, which may be impacted by the project;
  - (ii) Determine the needs and the impact of each stakeholder on the project;
  - (iii) Develop content, including updates, for a project webpage that will be hosted on the City's Major Projects website;
  - (iv) Develop content for communications to local residents and / or stakeholders. This includes, but is not limited to, direct letters and updates to residents, press releases, social media, and advertisements;
  - (v) Develop and implement two Open Houses to engage the public. The first Open House will present the options and decision points that are up for discussion. The second Open House will present the decided design and its construction;
  - (vi) Develop content for the Open Houses. This includes, but is not limited to, storyboards, handouts, and feedback forms. The feedback form will also be available as an online survey link to be posted on the project webpage;
  - (vii) Provide a summary report of responses received from the feedback forms and open houses;
  - (viii) Arrange targeted meetings with the public and other stakeholders, if necessary, to make sure that any outstanding issues are addressed;
  - (ix) Advise on the public participation strategy as necessary;
  - (x) Facilitate a value engineering exercise and produce a response report;
  - (xi) Perform roadway safety audits following the Transportation Association of Canada's *The Canadian Road Safety Audit Guide*;
  - (xii) Review project cost estimates;
  - (xiii) Review and make recommendations on Change in Services and Change in Works.

## **D10. BUILDING CANADA FUND CONDITIONS**

D10.1 In accordance with the Building Canada Fund, the Proponent will:

- (a) Maintain proper and accurate accounts and records, including but not limited to contracts, invoices, statements, receipts and vouchers, in respect of the Project, for at least six (6) years after the construction contracts Substantial Completion Dates. The City of Winnipeg has the contractual right to audit the records;

- (b) Respect all applicable labour, environmental and human rights legislation; and
- (c) Permit Canada, the Auditor General of Canada, and/or their designated representatives, to the extent permitted by law, at all times, to inspect the terms of the Contract and any records and accounts respecting the Project, and to have free access to the Project sites and any documentation relevant for the purpose of audit.

## **SUBMISSIONS PRIOR TO START OF SERVICES**

### **D11. AUTHORITY TO CARRY ON BUSINESS**

D11.1 The Consultant shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Consultant does not carry on business in Manitoba, in the jurisdiction where the Consultant does carry on business, throughout the term of the Contract, and shall provide the Project Manager with evidence thereof upon request.

### **D12. INSURANCE**

D12.1 The City shall provide and maintain the following owner controlled project insurance coverage to remain in place at all times during the performance of the Work:

- (a) Broad form builder's risk Insurance including testing and commissioning, insuring 100% of the full value of any work and the full value of products that are specified to be provided by the Owner for incorporation into any Work. The Contractor shall be responsible for deductibles up to \$50,000 maximum of any one loss;
- (b) Wrap-up liability insurance in an amount of no less than twenty-five million dollars (\$25,000,000) inclusive per occurrence and twenty-five millions dollars ( \$25,000,000) general aggregate, covering bodily injury, personal injury, property damage and products and completed operations consistent with industry standard insurance policy wordings. Wrap up liability insurance to also include evidence of contractual liability and cross liability clauses;
  - (i) The Contractor shall be responsible for deductibles up to \$50,000 maximum of any one loss;
  - (ii) The City of Winnipeg will carry such insurance to cover the Owner, Construction Manager and all consultants and contractors and sub-contractors as insured's. Provision of this insurance by the City of Winnipeg is not intended in any way to relieve the Contractor from his obligations under the terms of the Contract. Specifically, losses relating to deductibles for insurance, as well as losses in excess of limits of coverage and any risk of loss that is not covered under the terms of the insurance provided by the City of Winnipeg remains with the contractor;
  - (iii) Wrap-up liability insurance shall be maintained from the date of the commencement of the Work until the date of Total Performance of the work and shall include an additional 24 months completed operation coverage which will take affect after Total Performance.
- (c) Project specific professional liability insurance in the amount of at least five million dollars (\$5,000,000) per occurrence and five million dollars (\$5,000,000) aggregate, per claimant basis. Professional Liability insurance to remain in place during the performance of the Work and for 24 months after completion;
- (d) Project specific Contractors Pollution Liability (CPL) insurance in the amount of at least five million dollars (\$5,000,000) per occurrence and five million dollars (\$5,000,000) aggregate insuring against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder performed by the Contractor, its agents, representatives, employees or subcontractors. Coverage to include:
  - (i) bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death;

- (ii) property damage including physical injury to or destruction of tangible property and the resulting loss of use thereof; loss of use of tangible property that has not been physically injured or destroyed; diminution in value; and Natural Resource Damages;
  - (iii) clean-up costs (including restoration/replacement costs);
  - (iv) defense including costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensatory damages.
  - (v) transported cargo and Non-Owned Disposal Sites (blanket basis)
- (e) CPL coverage shall apply to both sudden and gradual pollution conditions, including the further disruption of pre-existing conditions, arising from the services rendered by the Contractor or others on their behalf. Further, coverage shall apply to conditions on, at, under and emanating from the job site including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, structures thereupon, the atmosphere or any watercourse or body of water, which results in any loss or damages defined above. Coverage shall not contain any "Insured vs Insured" exclusions preventing the City from bringing a claim against the Contractor, nor any restrictions for property of others in the care, custody or control of the Contractor.
- (f) CPL to remain in place during the performance of the Work and for 24 months after completion.
- (g) The City of Winnipeg shall provide certified copies of policies to the Contractor upon written request.

D12.2 The Contractor shall provide and maintain the following insurance coverage at all times during the performance of the work:

- (a) General liability in an amount of no less than five million (\$5,000,000) inclusive per occurrence limit for bodily injury, personal injury, property damage and products and completed operations consistent with industry standard insurance policy wordings with a minimum five million (\$5,000,000) general aggregate.
- (b) Automobile liability insurance for licensed automobiles used for or in connection with the Work in the amount of no less than five million dollars (\$5,000,000).
- (c) Workers compensation must be in place in accordance with provincial legislation.
- (d) All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.
- (e) The Contractor shall not cancel, or cause any such policy or policies to lapse without a minimum thirty (30) days prior written notice to the City;
- (f) The Contractor shall provide the Contract Administrator with evidence of insurance at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of the Contract. The evidence shall be in a form of a certificate of insurance and must be satisfactory to the City Solicitor.
- (g) All policies shall be in a form satisfactory to the City of Winnipeg and shall be kept in full force during the Work.

D12.3 The Contractor shall ensure the following:

- (a) All sub-contractors, consultants and sub-consultants shall provide and maintain connected general liability insurance in an amount no less than two million (\$2,000,000) inclusive per occurrence limit for bodily injury, personal injury, property damage and products and completed operations consistent with industry standard insurance policy wordings with a minimum five million (\$5,000,000) general aggregate. Policy to also include confirmation of contractual liability and cross liability clauses.
- (b) All parties covered under the wrap up insurance shall continue to carry general liability for six years (or warranty period) after the total completion of the project.

### **D13. SECURITY CLEARANCE**

- D13.1 Each individual proposed to perform the following portions of the Work:
- (a) any Work on private property;
  - (b) communicating with residents and homeowners in person or by telephone;
- shall be required to obtain a Criminal Record Search Certificate from the police service having jurisdiction at their place of residence.
- D13.2 Prior to the commencement of any Work specified in D13.1, and during the term of the Contract if additional or replacement individuals are proposed to perform Work, the Contractor shall supply the Contract Administrator with a Criminal Record Search Certificate obtained not earlier than one (1) year prior to the Submission Deadline, or a certified true copy thereof, for each individual proposed to perform such Work.
- D13.3 Any individual for whom a Criminal Record Search Certificate is not provided, or for whom a Criminal Record Search Certificate indicates any convictions or pending charges related to property offences or crimes against another person will not be permitted to perform any Work specified in D13.1.
- D13.4 Any Criminal Record Search Certificate obtained thereby will be deemed valid for the duration of the Contract subject to a repeated records search as hereinafter specified.
- D13.5 Notwithstanding the foregoing, at any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require an updated criminal records search. Any individual who fails to provide a satisfactory Criminal Record Search Certificate as a result of a repeated criminal records search will not be permitted to continue to perform any Work specified in D13.1.

### **D14. SAFE WORK PLAN**

- D14.1 The Consultant can not commence any Services until a Project-specific Safe-Work Plan(s) is verified as in place for the high-risk activities he may engage in prior to the commencement of a construction contract. The format is available at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

## **SCHEDULE OF SERVICES**

### **D15. COMMENCEMENT**

- D15.1 The Consultant shall not commence any Services until it is in receipt of a notice of award from the City authorizing the commencement of the Services.
- D15.2 The Consultant shall not commence any Services until:
- (a) the Project Manager has confirmed receipt and approval of:
    - (i) evidence of authority to carry on business specified in D11;
    - (ii) evidence of the insurance specified in D12;
    - (iii) the security clearances specified in D13;
    - (iv) the evidence of the Safe Work Plan specified in D14;
  - (b) the Consultant has attended a meeting with the Project Manager, or the Project Manager has waived the requirement for a meeting.
- D15.2.1 Further to D15.2(a)(iii), subject to all other requirements being met, the Consultant may, upon approval of the Project Manager, commence Services prior to submitting the security clearances.



D15.2.2 Further to D15.2(a)(iv), subject to all other requirements being met, the Consultant may, upon approval of the Project Manager, commence Services prior to submitting the Safe Work Plan.

D15.3 The City intends to award this Contract by June 15, 2012.

#### **D16. CRITICAL STAGES**

D16.1 The Consultant shall achieve critical stages of the Services for this Contract in accordance with the following requirements:

- (a) Preliminary Design by March 1, 2013;
- (b) Substantial Performance of all construction contracts by the end of 2014.

D16.2 Further to C1.1(tt), Total Performance for this Consulting Services Contract will be after the issuance of all Certificates of Acceptance for the construction contracts which is expected to be two (2) years after Substantial Performance for construction contracts and 5 years for acceptance of bridge bearings.

#### **D17. INVOICES**

D17.1 Further to C10, the Consultant shall submit monthly invoices to the Project Manager.

D17.2 Invoices must clearly indicate:

- (a) the City's purchase order number;
- (b) project file number;
- (c) a breakdown of:
  - (i) Preliminary Design Fees;
  - (ii) Other Project costs and Subconsultant Fees in accordance with D5.5(e) including the invoiced amount plus an allowed 5% handling fee. Copies of invoices must be attached.
- (d) the amount payable with GST and MRST (as applicable) shown as separate amounts; and
- (e) the Consultant's GST registration number.

D17.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D17.4 Invoices must be submitted to the City of Winnipeg Public Works Finance and Administration Division at 102-1155 Pacific Avenue.

## PART E - SPECIFICATIONS

### ADDITIONAL REQUIREMENTS

#### E1. AS-BUILT DRAWING REQUIREMENTS

- E1.1 Initial submission of AS-BUILT drawings must be received within three months of Substantial Performance of the construction contract, unless waived in writing by the Project Manager.
- E1.2 Drawings shall:
- (a) Conform to the *Manual for the Production of Construction Drawings for the City of Winnipeg*, Works and Operations Division (November 1984 – See Appendix B – References).
  - (b) Be in the AutoCAD format and indicate the version used
  - (c) Be AS-BUILT with dimensions corrected in both TEXT and GRAPHICS
  - (d) Show pavement dimensions to the “back of curb” (edge of pavement)
  - (e) Include plot style table
  - (f) Be produced in the NAD 83, UTM, ZONE 14, (Global co-ordinate system) Note: Public Works Engineering will provide the Legal Streets Base Layer for the required drawings
  - (g) Indicate if a scale factor was or was not used, and if used the scale factor used is to be indicated
  - (h) Show all bore holes and their UTM coordinates
  - (i) Include, where applicable:
    - (i) Pavement cross-section(s)
    - (ii) Asphalt Supplier
    - (iii) Concrete Supplier
    - (iv) Geotextile used – type, manufacturer & supplier
    - (v) Sub-drains used – type, manufacturer & supplier
- E1.3 A PDF copy of all AS-BUILT drawings shall be included.
- E1.4 Two (2) copies of the AutoCAD Digital Drawings and PDF copies shall be written to a compact disk (CD) or DVD. Both copies shall be clearly labelled identifying the Project number.
- E1.5 As-built hard copy must be on Mylar paper and must be sealed by an Engineer registered to practice in the Province of Manitoba.
- E1.6 Original signed Mylar copy and the two (2) CD’s shall be sent by mail or courier to:
- Attention:*
- |                         |  |
|-------------------------|--|
| City of Winnipeg        | Gary Tront, CET,   |
| Public Works Department | GIS Specialist   |
| 106-1155 Pacific Avenue | 204.471.7630   |
| Winnipeg, MB R3E 3P1    | <a href="mailto:gtront@winnipeg.ca">gtront@winnipeg.ca</a> |
- E1.7 In addition:
- (a) Included on the CD’s will be a separate drawing in AutoCAD format with the following (8) basic layers (none of which shall include text) and a list describing additional layers used:  
**Layer Names:**
    - 1) Street Surface
    - 2) Walk
    - 3) Alley
    - 4) Approach
    - 5) Ramp Curb
    - 6) Dimensions (to include all dimensions in the drawing)
    - 7) Drainage Inlets
    - 8) Elevations (min. all hi & low points)

## **E2. GEOTECHNICAL SAMPLING AND ANALYSES**

### **E2.1 Fieldwork**

- (a) Clear all underground services at each test-hole location.
- (b) On most projects, test-holes are required every 50 metres with a minimum of three (3) test holes per Project Location. For street projects greater than 500 metres, test holes may be taken every 100 m.
- (c) Record location of test-hole (offset from curb, distance from cross street and house number).
- (d) Drill 150 mm-diameter cores in pavement.
- (e) Drill 125 mm-diameter test-holes into fill materials and subgrade.
- (f) If a service trench backfilled with granular materials is encountered, another hole shall be drilled to define the existing sub-surface conditions.
- (g) Test-holes shall be drilled to depth of 2 m  $\pm$ 150 mm below surface of the pavement.
- (h) Recover pavement core sample and representative samples of soil (fill materials, pavement structure materials and subgrade).
- (i) Measure and record pavement section exposed in the test-hole (thickness of concrete or asphalt and different types of pavement structure materials).
- (j) Pavement structure materials to be identified as crushed limestone or granular fill and the maximum aggregate size of the material (20 mm, 50 mm or 150 mm).
- (k) Log soil profile for the subgrade.
- (l) Representative samples of soil must be obtained at the following depths below the bottom of the pavement structure materials – 0.1 m, 0.4 m, 0.7 m, 1.0 m, 1.3 m, 1.6 m, etc. Ensure a sample is obtained from each soil type encountered in the test-hole.
- (m) Make note of any water seepage into the test-hole.
- (n) Backfill test-hole with native materials and additional granular fill, if required. Patch pavement surface with hot mix asphalt or high strength durable concrete mix.
- (o) Return core sample from the pavement and soil samples to the laboratory.

### **E2.2 Lab Work**

- (a) Test all soil samples for moisture content.
- (b) Photograph core samples recovered from the pavement surface.
- (c) Conduct tests for plasticity index and hydrometer analysis on selected soil samples which are between 0.5 m and 1 m below top of pavement (this is the sub-grade on which the pavement and sub-base will be built). The selection will be based upon visual classification and moisture content test results, with a minimum of one sample of each soil type per street to be tested.
- (d) Prepare test-hole logs and classify subgrade (based on hydrometer) as follows:
  - < 30% silt                      - classify as clay
  - 30% - 50% silt                - classify as silty clay
  - 50% - 70% silt                - classify as clayey silt
  - > 70% silt                      - classify as silt

- E2.3 Geotechnical sampling and analyses requirements for bridges, slopes, retaining structures and land drainage structures will be developed by the Proponent and will be subject to the approval of the Project Manager. Details should be included in the proposal submission.

### **E3. SEWER TELEVISION GUIDELINES**

- E3.1 The Consultant is required to assess the extent of Closed Circuit Television (CCTV) inspection for all combined, wastewater, land drainage and storm relief sewers to confirm any sewer repairs required in the right-of-way within the limits of the Project.
- E3.2 The criteria provided are general guidelines and are not intended to replace sound municipal engineering judgement specific to the individual Project scope and/or location.
- E3.3 The available sewer televising information is contained within the City of Winnipeg's Sewer Management System (SMS) application.
- E3.4 Confirm televising requirements with Project Manager.
- E3.5 CCTV inspection general guidelines:
- (a) Confirm CCTV requirements with Water & Waste Department for sewers 1050 mm and larger in diameter;
  - (b) Televising if no previous CCTV inspections have been completed;
  - (c) Re-televising sewers in Categories A/B/C/X with a Structural Performance Grade (SPG) of 3 or higher that have not been televised in the previous 5 years;
  - (d) Sewers located more than two metres from the curb line (i.e. not located under pavement) do not need to be re-televised if previous CCTV inspection data exist. If a sewer repair or renewal requiring excavation is noted, contact the WWD;
  - (e) On all street reconstructions, regardless of location of the sewer (within the right-of-way);
  - (f) If the street exhibits obvious distress at/along the underground plant;
  - (g) Of all CB leads to be reused, as part of a street reconstruction or major rehabilitation.
- E3.6 For any uncertain situations and/or locations, contact the Project Manager.
- E3.7 The Consultant is required to coordinate the sewer-televising contract and communicate the results to the Water & Waste Department. Any repairs or other activities deemed necessary from these inspections must be coordinated with the Water & Waste Department.

### **E4. PUMP HOUSE DESIGN ELEMENTS**

- E4.1 The proposed pumping station will consist of a wet well design utilizing suitable centrifugal type pumps and the following design elements:
- (a) Handle anticipated storm water runoff area of approximately 8 to 12 hectares;
  - (b) Provide a firm capacity and total capacity to accommodate a 25-year design and a 50-year design summer rainfall event;
  - (c) 50-year design flow is anticipated to be approximately 1 to 2 m<sup>3</sup>/s;
  - (d) Vertical submersible pumps to be Flygt, ABS or equivalent;
  - (e) Provide high water alarm Flygt ball in wet well;
  - (f) Low maintenance – Graffiti resistant building exterior;
  - (g) "Railway Station" architectural theme, consistent with the pump station at the intersection of Dugald Road and Mazenod Road;
  - (h) Sloped metal roof;
  - (i) External building access to pumps with lockable hatch covers;
  - (j) Primary and standby power supplies (by means of one Manitoba Hydro service, and one natural gas powered generator complete with transfer switch);
  - (k) Provide Arch Flash Ratings for all electrical panels and switches;
  - (l) Provide spare space on electrical panels for future upgrades;

- (m) Three phase / 600 volt / 60 Hz electrical distribution;
- (n) Provide three phase to single phase transformer complete with single phase distribution panel;
- (o) External access to wet well for clean out purposes with lockable hatch covers;
- (p) Dual metal doors;
- (q) Security lighting on exterior building entrance;
- (r) Heating and ventilation to suit;
- (s) Soft start with separate across-the-line bypass contractors;
- (t) Sediment trap;
- (u) Floor in wet well shall slope towards pump intakes;
- (v) Rigid pipe in wet well to facilitate cleaning by vactor equipment;
- (w) Explosion proof lighting;
- (x) De-watering pump in wet well sump;
- (y) Wet well to be designed to match pump operations;
- (z) Ventilation (heated) shall be minimum 6 ACH. Ventilation system shall provide fresh air when occupied and can use up to 75% recirculated air when unoccupied;
- (aa) Pump operation controls to be either Bubblers or Ultrasonic;
- (bb) Pump starts to be alternated;
- (cc) Emergency back up lighting;
- (dd) Emergency exit lights to turn on and remain on for three minutes after interior station lights are turned off;
- (ee) Rising stem intake sluice gate;
- (ff) Structurally rated lifting beam;
- (gg) Gas detectors and environmental spill controls (if required);
- (hh) Superstructure to be insulated and heated;
- (ii) Metered domestic water supply equipped with backflow prevention device located above grade;
- (jj) Internal hose bibs;
- (kk) Paved access to site with hard surfaced parking area;
- (ll) Pump operation to be metered by hourly usage and amperage draws;
- (mm) Local shut off switches (unless using submersible pumps);
- (nn) Pump discharge to be capable of being metered and telemetered to City's SCADA system;
- (oo) Telephone land line required suitable for data transmission;
- (pp) Operating manual.

## **E5. SPECIFICATIONS FOR STRUCTURES**

- E5.1 All structures are to be designed for a minimum service life of 75 years.
- E5.2 Railway structures shall be designed in accordance with the latest edition of the AREMA Manual for Railway Engineering and the January 2006 revision of the CNR Guidelines for Design of Railway Structures.
- E5.3 Design and construction of shoring for the underpass shall be carried out in accordance with CNR Guidelines dated November 2011.

- E5.4 Highway structures shall be designed in accordance with CAN/CSA-S6-06 Canadian Highway Bridge Design Code.
- E5.5 Overhead sign structure requirements will be based on current Public Works standards using AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals, latest edition plus interims and the following additional criteria:
- (i) Equation 3-1 of AASHTO Clause 3.8.1 shall be modified as follows:
    - ◆  $P_z = 2.7 q K_z C_d$
    - ◆ Where  $q$  shall be taken from CAN/CSA S6-06, Table A3.1.1 for a return period of 50 years
    - ◆ The design ice thickness for ice accretion shall be the value given in CAN/CSA S6-06, Figure A3.1.4.
- E5.6 Earth retaining structures that are not part of the underpass or highway drainage structures shall be designed in accordance with the latest edition of the Canadian Highway Bridge Design Code.
- E5.7 Building structures shall be designed in accordance with the Manitoba Building Code.