



THE CITY OF WINNIPEG

REQUEST FOR PROPOSAL

RFP NO. 928-2015

**REQUEST FOR PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES FOR THE
FERMOR AVENUE BRIDGE OVER THE SEINE RIVER REHABILITATION AND
ROADWORKS FROM ST. ANNE'S ROAD TO ARCHIBALD STREET**

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. Experience of Proponent and Subconsultants (Section C)	4
B10. Experience of Key Personnel Assigned to the Project (Section D)	4
B11. Project Understanding and Methodology (Section E)	5
B12. Project Schedule (Section F)	5
B13. project management and Quality Control/Assurance (Section G)	5
B14. Disclosure	5
B15. Qualification	5
B16. Opening of Proposals and Release of Information	6
B17. Irrevocable Offer	6
B18. Withdrawal of Offers	7
B19. Interviews	7
B20. Negotiations	7
B21. Evaluation of Proposals	7
B22. Award of Contract	8

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. Preliminary Design	3
D6. Ownership of Information, Confidentiality and Non Disclosure	7

Submissions Prior to Start of Services

D7. Authority to Carry on Business	7
D8. Insurance	7

Schedule of Services

D9. Commencement	8
D10. Critical Stages	9
D11. Potential for Future Contract for Detailed Design and Contract Administration	9

PART E - SPECIFICATIONS

E1. Sewer Televising Guidelines for Public Works Projects (January 2009)	1
E2. Geotechnical Investigation Requirements for Public Works Street Reconstruction Projects (September 2015)	1

Appendix A – Definition of Professional Consultant Services – Engineering

Appendix B – Estimated Fees, Expenses and Level of Effort

PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 REQUEST FOR PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES FOR THE FERMOR AVENUE BRIDGE OVER THE SEINE RIVER REHABILITATION AND ROADWORKS FROM ST. ANNE'S ROAD TO ARCHIBALD STREET

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon. Winnipeg time, February 12, 2016.

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 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 Proponents Proposal Submission.

B3.7 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 Proponent 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 Proponent 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) Experience of Proponent and Subconsultants (Section C) in accordance with B9;
 - (b) Experience of Key Personnel Assigned to the Project (Section D), in accordance with B10;
 - (c) Project Understanding and Methodology (Section E) in accordance with B11; and
 - (d) Project Schedule (Section F) in accordance with B12.
 - (e) Project Management and Quality Control/Assurance (Section G) in accordance with B13.
- 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 original (marked "original") including drawings and five (5) copies. Submissions to be 8.5" x 11" except for tables, drawings, and schedule which may be fold out 11" x 17".
- B6.6 Proposal format, including type of binding, number of pages, and font, etc., will not be regulated, except that the Proposal should contain a table of contents, page numbering and should be in the Sections identified 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 Proponents are advised that inclusion of terms and conditions inconsistent with the Request for Proposal, will be evaluated in accordance with B21.1(a).
- B6.8 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.

B6.9 Proposals submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B6.10 Proposals shall be submitted to:

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

B6.11 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 the Preliminary Design phase identified in D4 Scope of Services.

B8.2 Adjustments to Fees will only be considered based on increases to the Scope of Services.

B8.2.1 The City will not consider an adjustment to the Fees based on changes in the Project budget or the Final Total Construction Cost.

B8.3 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.

B8.4 The Fee Proposal shall also include an allowance for Allowable Disbursements as defined in C1.1(b), but shall exclude the costs of any materials testing, soils and hazardous materials investigation during construction.

B8.5 Further to B8.4, the Fee Proposal shall not include disbursement costs for a geotechnical drilling and testing program, sewer televising, hydroexcavation, advertising, mailings, and a public open house venue. For Contract Award, an allowance will be added to the evaluated Fee Proposal to cover these costs.

B8.6 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.

B8.7 Payments to Non-Resident Consultants are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B9. EXPERIENCE OF PROPONENT AND SUBCONSULTANTS (SECTION C)

B9.1 Proposals should include: details demonstrating the history and experience of the Proponent and Subconsultants in applicable professional consultant services as required in D4.1 and defined in Appendix A for up to three projects of similar scope and complexity and/or similar size and complexity. For each project the Proponent should submit: a description of the project, the role of the consultant, project's final consulting services cost, project's final construction cost, the year the project was completed, the project owner, and reference information (one current name with telephone number per project).

B9.2 The Proposal should include 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.

B10. EXPERIENCE OF KEY PERSONNEL ASSIGNED TO THE PROJECT (SECTION D)

B10.1 Describe your approach to overall team formation and coordination of team members. Include an organizational chart for the Project.

B10.2 Submit the experience and qualifications of the Key Personnel assigned to the Project for projects of comparable size and complexity, including the principals-in-charge, the Consultants Representative, managers of the key disciplines and lead designers. Include educational background and degrees, professional recognition, job title, years of experience in current position, years of experience in design and construction, and years of experience with existing employer. Roles of each of the Key Personnel in the Project should be identified in the organizational chart referred to in B10.1. For each person identified, list at least two comparable projects in which they have played a primary role. If a project selected for a key person is included in B9, provide only the project name and the role of the key person. For other projects provide the description of project, role of the person, Project Owner, reference information (one current name with telephone numbers per project).

B10.3 Further to B10.2, the level of effort of the Key Personnel presented in the Table required in B11.3 will be considered in evaluating the experience and qualifications.

B11. PROJECT UNDERSTANDING AND METHODOLOGY (SECTION E)

- B11.1 Proposals should address the team's understanding of the broad functional and technical requirements, the team's understanding of the key design issues, the City's Project methodology with respect to the information provided within this RFP, and any other issue that conveys your team's understanding of the Project requirements.
- B11.2 A discussion of options to be examined shall be presented.
- B11.3 Methodology should be presented in accordance with the Scope of Services identified in D4.1. A table, similar to the "Estimated Fees, Expenses and Level of Effort" table attached hereto as Appendix B, shall be included that details an outline of the work program for all Phases of the assignment including the hourly rate and estimated time for each individual and each task. The table shall also include the cost of all applicable disbursements and any associated mark-ups. Subtotals shall be provided summarizing the costs for each individual each task, and each Phase of the assignment.

B12. PROJECT SCHEDULE (SECTION F)

- B12.1 Proponents should present a carefully considered Critical Path Method schedule using Microsoft Project or similar project management software, complete with durations (weekly timescale) and milestone dates or events. The schedule should address each requirement of the Scope of Services. The Proponent's schedule should include critical dates for review and approval processes by the City and other organizations. Reasonable times should be allowed for completion of these processes. The critical path should be identified.

B13. PROJECT MANAGEMENT AND QUALITY CONTROL/ASSURANCE (SECTION G)

- B13.1 Proponents shall describe their methods for project management.
- B13.2 Proponents shall describe their methods for quality control and quality assurance.

B14. DISCLOSURE

- B14.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.
- B14.2 The Persons are:
- (a) N/A

B15. QUALIFICATION

- B15.1 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.
- B15.2 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>

B15.3 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.

B15.4 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.

B15.5 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.

B16. OPENING OF PROPOSALS AND RELEASE OF INFORMATION

B16.1 Proposals will not be opened publicly.

B16.2 After award of Contract, the names of the Proponents and the Contract amount of the successful Proponent 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/>.

B16.3 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.

B16.4 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.

B17. IRREVOCABLE OFFER

B17.1 The Proposal(s) submitted by the Proponent shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.

B17.2 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.

B18. WITHDRAWAL OF OFFERS

B18.1 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.

B18.1.1 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.

B18.1.2 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.

B18.1.3 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 B18.1.3(b), declare the Proposal withdrawn.

B18.2 A Proponent who withdraws its Proposal after the Submission Deadline but before its offer has been released or has lapsed as provided for in B17.2 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.

B19. INTERVIEWS

B19.1 The Project Manager may, in his/her sole discretion, interview Proponents during the evaluation process.

B20. NEGOTIATIONS

B20.1 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.

B20.2 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.

B20.3 If, in the course of negotiations pursuant to B20.2 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.

B21. EVALUATION OF PROPOSALS

B21.1 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 B15: (pass/fail)
- (c) Fees; (Section B) 20%
- (d) Experience of Proponent and Subconsultants; (Section C) 25%

- | | |
|--|-------------|
| (e) Experience of Key Personnel Assigned to the Project; (Section D) | 25% |
| (f) Project Understanding and Methodology (Section E) | 30% |
| (g) Project Schedule. (Section F) | (pass/fail) |
| (h) Project Management and Quality Control/ Assurance (Section G) | (pass/fail) |

- B21.2 Further to B21.1(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.
- B21.3 Further to B21.1(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.
- B21.4 Further to B21.1(c), Fees will be evaluated based on Fees submitted in accordance with B8.
- B21.5 Further to B21.1(d), Experience of Proponent and Subconsultants will be evaluated considering the experience of the organization on projects of similar size and complexity as well as other information requested.
- B21.6 Further to B21.1(e), Experience of Key Personnel Assigned to the Project will be evaluated considering the experience and qualifications of the Key Personnel and Subconsultant personnel on Projects of comparable size and complexity.
- B21.7 Further to B21.1(f), Project Understanding and Methodology will be evaluated considering your firm's understanding of the City's Project, project management approach and team organization.
- B21.8 Further to B21.1(g), Project Schedule will be evaluated considering the Proponent's ability to comply with the requirements of the Project.
- B21.9 Notwithstanding B21.1(d) to B21.1(g), where Proponents fail to provide a response to B6.2(a) to B6.2(d), the score of zero may be assigned to the incomplete part of the response.
- B21.10 Proposals will be evaluated considering the information in the Proposal Submission and any interviews held in accordance with B19.

B22. AWARD OF CONTRACT

- B22.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.
- B22.2 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.
- B22.2.1 Without limiting the generality of B22.2, 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.

- B22.3 The Work of this Contract is contingent upon Council approval of sufficient funding in the 2016 Capital Budget. If the Capital Budget approved by Council does not include sufficient funding for the Work, the City will have no obligation to award a Contract.
- B22.4 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.
- B22.5 The City may, at its discretion, award the Contract in phases.
- B22.6 Notwithstanding Paragraph 6 of Form A: Proposal and C4, the City will issue a Letter of Intent to the successful Proponent in lieu of execution of a Contract.
- B22.6.1 The Contract documents as defined in C1.1(n)(ii) in their entirety shall be deemed to be incorporated in and to form a part of the Letter of Intent notwithstanding that they are not necessarily attached to or accompany said Letter of Intent.
- B22.7 The form of Contract with the City of Winnipeg will be based on the Contract as defined in C1.1(n).
- B22.8 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.
- B22.9 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.
- 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*, these Supplemental Conditions are applicable to the Services of the Contract.

D2. PROJECT MANAGER

D2.1 The Project Manager is:

Darren Burney, P. Eng., Bridge Projects Engineer, City of Winnipeg

Email: dburney@winnipeg.ca

Telephone No. 204 986-5409

D2.2 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.

D2.3 Proposal Submissions must be submitted to the address in B6.10

D3. BACKGROUND

D3.1 This assignment generally encompasses undertaking the preliminary design of the rehabilitation of the Fermor Avenue over Seine River bridge and roadworks from St. Anne's Road to Archibald Street. This section of the Winnipeg transportation network is slated for reconstruction and is to be redone in the best and most efficient way. Preliminary design is required to identify and address all major issues, determine the scope of work, and produce Class 3 cost estimates where the project can proceed to detailed design and construction.

D3.2 Bridge Structure Rehabilitation

- (a) The existing Fermor Avenue over Seine River bridge is a three span mixed steel and precast concrete girder (7 interior lines of steel girders and 3 exterior lines each side of precast girders) bridge with cast-in-place concrete deck, barriers, and sidewalks.
- (b) The bridge was initially constructed in 1953, widened in 1969, and rehabilitated in 1984.
- (c) The bridge superstructure is in fair to poor condition. It is anticipated that a major rehabilitation would be required which would involve either the removal of the entire bridge deck or at least the top mat of reinforcing steel in the bridge deck. The bridge may have to be widened and the cross section reconfigured to accommodate new roadway geometries and active transportation.

D3.3 Active Transportation Connectivity

- (a) A multi-use path exists along the north side of Fermor Avenue within the study limits. The multi-use path utilizes a low level pedestrian bridge crossing of the Seine River north of Fermor Avenue just downstream of the vehicular bridge. When the Seine River experiences high water levels the low level crossing floods and the multi-use path is then closed. Appropriate connection of the path to the north sidewalk of the Fermor Avenue bridge is desired so the Seine River is crossable at all times.
- (b) A new recreational pool has been constructed northwest of the bridge. An active transportation link exists south of Fermor Avenue on Niakwa Road. The provision of an underbridge path to connect the path north of the bridge with the link south of the bridge is desired.
- (c) Improvement of the active transportation connection across Fermor Avenue at Archibald Street/Royal Salinger Road intersection is desired.

- (d) Provision of an active transportation pathway from the Fermor Avenue/Royal Salinger Road intersection south down Niakwa Road/Pebble Beach Road to the Royal Salinger Road crossing of the CPR Emerson train tracks and further south to Willowlake Crescent is desired.

D3.4 Road Reconstruction/Rehabilitation

- (a) Fermor Avenue is a Regional Street and is part of the Trans-Canada Highway. It is a limited access major arterial and is a truck route. The posted speed on Fermor Avenue is 70 kmh. The proposed design is to accommodate an 80 km/hr design speed. Fermor Avenue carries two lanes in each direction which are deemed adequate for the foreseeable future from City traffic network analyses.
- (b) Fermor Avenue between St. Anne's Road and Archibald Street is in fair-poor condition and is slated for reconstruction.
- (c) Safety concerns related to geometrics, medians, super-elevations, and accesses are present. The proposed design must meet current design standards.
- (d) During construction it is anticipated that one lane in each direction of travel will be maintained on Fermor Avenue between St. Anne's Road and Archibald Street and that full operation of intersections at St. Anne's Road and Archibald Street will be maintained. The design would maintain pedestrian and cycling access where required.

D3.5 Intersection Improvements

- (a) The intersections at St. Anne's Road and Archibald Street are to be included. The Archibald Street intersection is of particular concern to the City in terms of design. As stated above, an appropriate active transportation crossing of Fermor Avenue at Archibald Street is to be provided.
- (b) Traffic analysis will be required at the St. Anne's Road and Archibald Street intersections to confirm that auxiliary lane lengths westbound on Fermor Avenue approaching St. Anne's Road and eastbound on Fermor Avenue approaching Archibald Street have sufficient storage length to meet demand on a 20-year design horizon. Traffic analysis will also be required to support design options for Royal Salinger Road between and including the Fermor Avenue and Niakwa Road intersections.

D3.6 Utility Improvements

- (a) Utility renewal/improvement works shall be identified.
- (b) The outfalls to the Seine River in the project limit including the deteriorated culvert at the southeast will be likely renewed as part of this project.

D3.7 Subsequent Phases/Schedule

- (a) Preliminary design is to be completed in 2016. Detailed design is scheduled to be completed in 2017 and construction would occur in 2018 and 2019. The current assignment is for preliminary design only.

D3.8 Budget

- (a) The budget for the entire project including all phases is currently \$19,000,000.

D4. SCOPE OF SERVICES

D4.1 The Services required under this Contract shall consist of the preliminary design of the Fermor Avenue over the Seine River bridge rehabilitation and roadworks from St. Anne's Road to Archibald Street. as outlined in D5.

D4.2 The City documents identified as "Definition of Professional Consultant Services – Engineering" dated January 19, 2012 and the "Manual of Project Administration Practice", dated March 1992" shall be applicable to the provision of consulting services for this project.

D5. PRELIMINARY DESIGN

- D5.1 The preliminary design shall be generally consistent with Type 1 and 2 services as outlined in Appendix A. Services shall include but not be limited to the items listed below.
- D5.2 Project Meetings
- (a) Hold meetings with the City Project Manager and members of the appointed City of Winnipeg Project Technical Steering Committee at project start up, and at other key times including presentation of the findings of the investigations, presentation of potential options and to gain concurrence of recommendations for the alternatives to be developed, prior to and after the independent road safety audit and the public engagement, and during finalization of the preliminary design report.
- D5.3 Review of Existing Information
- (a) Review existing record drawings, utility information, reports, and other information that will be provided by the City to establish relevant information. This information will be provided during the RFP period upon request to the Project Manager. Confirm and supplement this information as necessary.
- D5.4 Site Investigation
- (a) Carry out detailed on-site topographic surveys, inspections and site information gathering.
 - (b) Carry out sewer televising in accordance with E1.
- D5.5 Hydraulic Investigation
- (a) Perform a hydraulic investigation to confirm sufficiency of the existing channel and of any modifications contemplated.
- D5.6 Geotechnical Investigation
- (a) Perform a geotechnical investigation sufficient for the preliminary design the recommended alternative. Carry out geotechnical drilling, sampling, and material testing for foundations that may be required at the existing bridge structure and slope stability analysis of the existing adjacent creek banks.
 - (b) Carry out a geotechnical investigation of the roads in accordance with E2.
 - (c) Fees for geotechnical drilling including sampling, and material testing shall not be included in the Fee Proposal. A geotechnical drilling and testing program shall be proposed and an estimated budget shall be provided separately from the Fee Proposal. For Contract Award, an allowance will be added to the evaluated Fee Proposal to cover these costs.
- D5.7 Bridge Condition Assessment
- (a) Carry out a bridge condition assessment. Produce an OSIM-like inspection report for the bridge structure.
 - (b) Carry out other related testing of the bridge to document conditions, and to assist in determining recommended remedial measures.
- D5.8 Bridge Structure Load Rating and Design of Modifications
- (a) The existing structure shall be load rated in accordance with the Canadian Highway Bridge Design Code, CAN/CSA-S6-14. The Consultant shall gain acceptance of the City Project Manager for the assumptions used in the load rating and for an additional three (3) special overload vehicles that are to be used.
 - (b) Structure modifications shall be designed in accordance with the Canadian Highway Bridge Design Code, CAN/CSA-S6-14. The design live load vehicle shall be the CL-625. All structures shall be designed for a minimum 75 year design life.
- D5.9 Active Transportation Assessment

- (a) Carry out a condition assessment of the existing active transportation network components.
- (b) Carry out an active transportation network assessment. Consult with the City to determine and coordinate with latest plans for the active transportation network in the area.

D5.10 Road Condition Assessment

- (a) Carry out a road condition assessment.
- (b) Carry out a road safety audit of the current road configuration. Review traffic data and collision statistics provided by the City. As safety is a key feature of this project, the City may retain an 3rd party to perform an independent road safety audit and may share the results after the Consultant has performed their work.

D5.11 Overhead Sign Structures

- (a) Carry out an overhead sign structure condition assessment.
- (b) Rationalize/review requirements for overhead sign structures with the proposed design options.

D5.12 Utilities

- (a) Review existing utilities at and near the bridge and hold meetings with representatives from the utilities as necessary. Perform televising as required and perform hydroexcavation if necessary to confirm elevations. Determine whether there will be any utility relocation requirements in consultation with the proper authority and the City of Winnipeg. Fees for sewer televising and hydroexcavation shall not be included in the Fee Proposal. A sewer televising and hydroexcavation program shall be proposed and an estimated budget shall be provided separately from the Fee Proposal. For Contract Award, an allowance will be added to the evaluated Fee Proposal to cover these costs.
- (b) Provide engineering evidence to support any recommended changes to any drainage ditches.

D5.13 Property

- (a) Assess property requirements to confirm additional property requirement and/or construction easements.

D5.14 Regulatory Requirements

- (a) Determine regulatory approval requirements including those with City of Winnipeg Waterways, Manitoba Conservation, Manitoba Water Resources, Navigable Waters, and Department of Fisheries and Oceans (DFO), and requirements for any other regulatory approvals that may be necessary.

D5.15 Active Transportation Network Design

- (a) The project team should include a bicycle facilities design expert with extensive experience in the successful design of complex bicycle facilities within North America.
- (b) Provide options and recommendations for a greater degree of active transportation connectivity. Options to be generally consistent with the Transportation Master Plan, the adopted Pedestrian and Cycling Strategies document, and the latest Winnipeg Cycling Map.
- (c) Facilities are to be designed for people of all ages and abilities.
- (d) The new alternative pedestrian and cycling connection over the Seine River bridge must include appropriately designed vulnerable user protection from the high speed roadway.
- (e) An underbridge path connecting pathways north and south of the bridge shall be provided. Consideration shall be made to provide the highest pathway elevation, to minimize closure of the path due to high water levels, while still providing sufficient underbridge clearance.
- (f) Design a bicycle and pedestrian crossing of Fermor Avenue at Archibald Street that includes appropriate user separation and detection.

- (g) Design new and/or upgraded bicycle facilities within the project limits that terminate at logical locations for construction purposes.

D5.16 Road Design

- (a) The project team should include a senior transportation engineer with extensive experience in the successful design and completion of major transportation corridor projects.
- (b) Confirm requirements with the City of Winnipeg. Arrive at agreed on design criteria early in the project. Produce a design basis memorandum.
- (c) Address all major issues and coordination items.
- (d) Investigate alternatives so the best and most efficient design can be determined.
 - (i) A concept of the Fermor Realignment is available in the reference information. This concept was developed considering a 6.0 m median which could offer a balance of cost and benefit. Investigation of alternatives should include but not be limited to this concept.
 - (ii) Develop horizontal and vertical alignment options for Fermor Avenue based on current national guidelines and local standards.
 - (iii) Perform a traffic analysis at the St. Anne's Road and Archibald Street intersections to confirm that auxiliary lane lengths westbound on Fermor Avenue approaching St. Anne's Road and eastbound on Fermor Avenue approaching Archibald Street have sufficient storage length to meet demand on a 20-year design horizon. Traffic analysis will also be required to support design options for Royal Salinger Road between and including the Fermor Avenue and Niakwa Road intersections.
 - (iv) Evaluate horizontal alignments that offer the optimal cost/benefit in terms of:
 - ◆ Enhancing traffic safety through an increased median width, or median enhancements.
 - ◆ Utilizing existing pavement or substructure for portions of the segment consider a combination of pavement widening, sandwich type rehabilitation and new construction.
 - ◆ Traffic staging during construction.
 - (v) Develop and evaluate multiple bridge superstructure configurations, with the intent of conserving the existing substructure geometry, that provide adequate cross-sectional dimensions in terms of:
 - ◆ Shy distances
 - ◆ Median width or consideration to a barrier median
 - ◆ Lane widths
 - ◆ Pedestrian Facilities
 - ◆ Cycling Facilities
 - (vi) Rationalize widening the bridge if necessary utilizing a cost/benefit approach.
 - (vii) Review and provide recommendations for managing access along Fermor Avenue to enhance traffic safety and operations.
 - (viii) Review and provide recommendations for improving traffic operations on Archibald Street south of Fermor Avenue and the Royal Salinger intersection.
 - (ix) Produce drainage plans.
- (e) Produce pavement design recommendations and a pavement design brief.
- (f) The City of Winnipeg will conduct an independent safety audit on the recommended preliminary design. Consultants are to address each review comment accordingly and make the necessary changes as directed by the City.

D5.17 Aesthetics/Fit With Surroundings

- (a) Aesthetics and fit with the surroundings is to be included. A landscape architect should be included on the team.

- (b) The design shall be compatible with the proposed gateway markers for the St. Vital Biz at St. Anne's Road and Fermor Avenue and the rain garden northwest of the bridge.

D5.18 Generation, Development, and Selection of Options

- (a) After a study of the area and definition of needs and design basis and preparation of a design basis memorandum, meetings shall be held with the City Project Manager and the City Project Steering Committee to discuss major issues and identify potential viable options.
- (b) The various viable options shall be developed to allow comparison and selection. The evaluation methodology shall be developed in consultation with the City Project Manager to rank and select the preferred options.
- (c) The Consultant shall proceed in developing a preliminary design for the selected options which includes drawings, Class 3 cost estimates (expected accuracy of +30% to -20%), traffic management plans during construction, risk assessments, and proposed construction schedules.

D5.19 Public Engagement

- (a) Public engagement is an integral part of the project, which will allow better decisions to be made, incorporating the interests and concerns of affected stakeholders, while meeting the needs of the City. This will provide greater transparency in the decision-making process and provide for a more sustainable solution. The public engagement process shall be based on IAP2 principles and best practices (see <http://iap2canada.ca/>).
- (b) The public engagement lead must have IAP2 membership, and should have completed the IAP2 Foundations/Certificate courses or related public engagement courses.
- (c) The public engagement scope should include the following:
 - (i) Identify and prepare a profile of project key stakeholders in the immediate area that may be impacted by the project, determining both the needs and impact on each stakeholder. This will also include groups with a high interest in the outcomes of the project.
 - (ii) Build relationships with key stakeholders as necessary to ensure that wants and outstanding issues are addressed.
 - (iii) Develop content, including a map of the project area, a project timeline, and project updates, for a project webpage that will be hosted on the City's Major Projects website.
 - (iv) Develop content for communications with stakeholders, including, but not limited to, direct letters and/or updates to key stakeholders, press releases, advertisements, etc.
 - (v) Develop and hold one (1) public open house and related material before the preliminary design is completed.
 - (vi) Provide a public engagement report that may be posted on the project's website so that stakeholders can see how their input has been considered and used. Reports should include: cataloguing public input and project response to it; a detailed record of all promotions and communications, attendance numbers and dates of events; and a summary of findings and results.
- (d) Costs for advertising, mailings, and the public open house venue shall not be included in the Fee Proposal. For Contract Award, an allowance will be added to the evaluated Fee Proposal to cover these costs.
- (e) Advise on any additional public engagement strategy as necessary.

D5.20 Preliminary Design Report

- (a) Prepare and submit a preliminary design report outlining the results of the investigations and assessments carried out, options investigated, and the recommended scope of work, complete with drawings Class 3 (expected accuracy of +30% to -20%) cost estimates, traffic management plans during construction, risk assessments, proposed construction

schedules, and public engagement feedback. Five (5) hard copies along with an electronic PDF version properly bookmarked of the final report shall be submitted.

- (b) A draft report is to be submitted.
- (c) A revised draft report is to be submitted after incorporating comments from an independent road safety audit that the City will carry out.
- (d) The report is to be finalized after incorporating feedback from the public open house and from the City Project Manager.

D5.21 Monthly Status Reports

- (a) The consultant shall submit a written Monthly Status Report every month to the City Project Manager during Preliminary Design. The status reports shall include:
 - (i) Progress on tasks since previous report;
 - (ii) Planned accomplishments for the next period;
 - (iii) Project schedule update;
 - (iv) Project budget update;
 - (v) List concerns, potential problems, risks, etc, for the project.

D6. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

- D6.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Consultant are the property of the City and shall not be appropriated for the Consultants own use, or for the use of any third party.
- D6.2 The Consultant shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Project Manager.
- D6.3 The following shall be confidential and shall not be disclosed by the Consultant to the media or any member of the public without the prior written authorization of the Project Manager;
 - (a) information provided to the Consultant by the City or acquired by the Consultant during the course of the Work;
 - (b) the Contract, all deliverables produced or developed; and
 - (c) any statement of fact or opinion regarding any aspect of the Contract.
- D6.4 A Consultant who violates any provision of D5 may be determined to be in breach of Contract.

SUBMISSIONS PRIOR TO START OF SERVICES

D7. AUTHORITY TO CARRY ON BUSINESS

- D7.1 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.

D8. INSURANCE

- D8.1 The Consultant shall procure and maintain, at its own expense and cost, insurance policies with limits no less than those shown below.
- D8.2 As a minimum, the Consultant shall, without limiting its obligations or liabilities under any other contract with the City, procure and maintain, at its own expense and cost, the following insurance policies:

- (a) Comprehensive or Commercial General Liability Insurance including:
 - (i) an inclusive limit of not less than \$2,000,000 for each occurrence or accident with a minimum \$2,000,000 Products and Completed Operations aggregate and \$5,000,000 general aggregate;
 - (ii) all sums which the Consultant shall become legally obligated to pay for damages because of bodily injury (including death at any time resulting therefrom) sustained by any person or persons or because of damage to or destruction of property caused by an occurrence or accident arising out of or related to the Services or any operations carried on in connection with this Contract;
 - (iii) coverage for Products/Completed Operations, Blanket Contractual, Consultant's Protective, Personal Injury, Contingent Employer's Liability, Broad Form Property Damage, Employees as Additional Insureds, and Non-Owned Automobile Liability;
 - (iv) a Cross Liability clause and/or Severability of Interest Clause providing that the inclusion of more than one Insured shall not in any way affect the rights of any other Insured hereunder in respect to any claim, demand, suit or judgment made against any other Insured;
- (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Consultant directly or indirectly in the performance of the Service. The Limit of Liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
- (c) Professional Errors and Omissions Liability Insurance including:
 - (i) an amount not less than \$5,000,000 . per claim and \$5,000,000 in the aggregate.

- D8.2.1 The Consultant's Professional Errors and Omissions Liability Insurance shall remain in force for the duration of the Project and for twelve (12) months after total performance.
- D8.3 The policies required in D8.2(a) shall provide that the City is named as an Additional Insured thereunder and that said policies are primary without any right of contribution from any insurance otherwise maintained by the City.
- D8.4 The Consultant shall require each of its Subconsultants to provide comparable insurance to that set forth under D8.2(a) and D8.2(c).
- D8.5 The Consultant shall provide the Project Manager with a certificate(s) of insurance for itself and for all of its Subconsultants, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Services, but in no event later than the date specified in C4.1 for the return of the executed Contract. Such Certificates shall state the exact description of the Services and provide for written notice in accordance with D8.8.
- D8.6 The Consultant may take out such additional insurance as it may consider necessary and desirable. All such additional insurance shall be at no expense to the City.
- D8.7 All insurance, which the Consultant is required to obtain with respect to this Contract, shall be with insurance companies registered in and licensed to underwrite such insurance in the Province of Manitoba.
- D8.8 The Consultant shall not cancel, materially alter, or cause any policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the City.

SCHEDULE OF SERVICES

D9. COMMENCEMENT

- D9.1 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.
- D9.2 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 D7;
 - (ii) evidence of the insurance specified in D8;
- (b) the Consultant has attended a meeting with the Project Manager, or the Project Manager has waived the requirement for a meeting.

D9.3 The City intends to award this Contract by March 31, 2016.

D10. CRITICAL STAGES

D10.1 The Consultant shall achieve critical stages of the Services for this Contract in accordance with the following requirements:

- (a) Submission of draft preliminary design report for City review by August 31, 2016.
- (b) Incorporating comments from the independent road safety audit by September 30, 2016.
- (c) Holding of a public information session by October 31, 2016.
- (d) Submission of final preliminary design report by November 30, 2016.

D11. POTENTIAL FOR FUTURE CONTRACT FOR DETAILED DESIGN AND CONTRACT ADMINISTRATION

D11.1 The City of Winnipeg, in its sole discretion after consideration of the Consultant's performance on Bid Opportunity No. 928-2015, may negotiate and enter into a contract with the Consultant, to undertake the work associated with the detailed design and contract administration for implementation of remedial measures without a public bid solicitation. No compensation will be provided to the Consultant for participating in this negotiation. The City will provide terms to the Consultant if it initiates negotiations with the Consultant. The City of Winnipeg will be under no obligation to initiate or enter into a subsequent contract and may choose to issue a public bid solicitation for the Work with respect to detailed design and contract administration, if the City of Winnipeg wishes to proceed in that manner.

PART E - SPECIFICATIONS

E1. SEWER TELEVISION GUIDELINES FOR PUBLIC WORKS PROJECTS (JANUARY 2009)

- E1.1 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 street renewal.
- E1.2 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.
- E1.3 The available sewer televising information is contained within the City of Winnipeg's Sewer Management System (SMS) application.
- E1.4 Confirm televising requirements with Project Manager.
- E1.5 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.
- E1.6 For any uncertain situations and/or locations, contact the Project Manager.
- E1.7 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.

E2. GEOTECHNICAL INVESTIGATION REQUIREMENTS FOR PUBLIC WORKS STREET RECONSTRUCTION PROJECTS (SEPTEMBER 2015)

- E2.1 Field Work
- (a) Clear all underground services at each test-hole location.
 - (b) On most projects, test-holes are required every 50 m 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. More or fewer test-holes may be required depending upon known site conditions – confirm with the Streets Project Engineer.
 - (c) Record location of test-hole (offset from curb, distance from cross street and house number).
 - (d) Drill 150 mm-diameter core in pavement.
 - (e) Drill 125 mm-diameter test-hole 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 are to 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 Atterberg Limits 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:
 - (i) < 30% silt -classify as clay
 - (ii) 30% - 50% silt - classify as silty clay
 - (iii) 50% - 70% silt - classify as clayey silt
 - (iv) > 70% silt -classify as silt

E2.3 Notes

- (a) For Pavement Rehabilitations and Mill and Fill Pavement Rehabilitation Method pavement cores may be required. Contact the City's Project Manager to confirm requirements.
- (b) For any uncertain situations and/or locations, or clarification of these requirements, contact the City's Project Manager.

APPENDIX A – DEFINITION OF PROFESSIONAL CONSULTANT SERVICES – ENGINEERING

APPENDIX B – ESTIMATED FEES, EXPENSES AND LEVEL OF EFFORT