



**THE CITY OF WINNIPEG**

# **REQUEST FOR PROPOSAL**

**RFP NO. 24-2017**

**REQUEST FOR PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES FOR  
2017 STREETS MAINTENANCE PRESERVATION PROGRAM**

**Proposals shall be submitted to:**

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

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 REQUEST FOR PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES FOR 2017 STREETS MAINTENANCE PRESERVATION PROGRAM

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, March 6, 2017.

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, 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 Request for Proposal 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 Request for Proposal 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 he/she 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) Project Management Team Proposal (Section D), in accordance with B10;
  - (c) Project Understanding and Methodology (Section E) in accordance with B11;
  - (d) Technical Proposal (Section F) in accordance with B12; and
  - (e) Project Schedule (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 8.5" x 11" original (marked "original") including drawings and four (4) copies (subject to B6.6) for sections identified in B6.1 and B6.2.
- B6.6 Proposal format, including type of binding, number of pages, size of pages and, font, etc., will be regulated as follows:
- (a) The Proposal should be presented in the Sections identified in D6.1 and D6.2.
  - (b) The Proposal(s) shall be submitted on 8.5" x 11" paper; with a font of not less than 11 pt Arial; margins of not less than 0.75"; line-spacing of not less than single; and shall be no more than eleven (11) pages in length exclusive of the required form(s). Only the first eleven (11) pages of each Proposal will be evaluated.
  - (c) Anything included as an appendix will not be evaluated.
  - (d) A total of two (2) of the eleven (11) total pages may be presented on 11" x 17" paper, with the copies.

- 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 his/her 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 Proponent shall complete Form B: Fees, summarizing all applicable Fees.
- B8.2 The Proposal shall include the Total Fees for all disciplines and/or phases identified in D4 Scope of Services as it relates to the project locations:
- (a) Project Planning and Preliminary Design;
  - (b) Detailed Design and Contract (Bid Opportunity) Preparation;
  - (c) Contract Administration services; and
  - (d) Post-Construction services.
- B8.3 Adjustments to Fees will only be considered based on increases 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 Fee Proposal shall also include an allowance for Allowable Disbursements as defined in C1.1(b), but shall exclude the costs of any site investigation (geotechnical) services, materials testing services, Underground Structures acquisitions, pipeline loading assessments, closed circuit television (CCTV) sewer inspection, and/or hazardous materials investigation, or those included in B8.4. No other disbursements will be permitted.
- B8.5.1 Further to B8.5, the Contract Award shall include, in addition to the Total Bid Price, an allowance for the costs of any site investigation (geotechnical) services, materials testing services, Underground Structures acquisitions, pipeline loading assessments, closed circuit television (CCTV) sewer inspection, and/or hazardous materials investigation in the amount of up to 20% of the Total Bid Price;
- B8.5.2 Further to D15.2(c)(iii) and D15.2(c)(iv), the Allowable Disbursements shall be identified separately on each invoice.
- B8.6 The Proposal shall include the Fees to be assessed for Engineering and other Services as defined in the Scope of Services. The Fees must be included in the Proposal with descriptions, but summarized in Form B: Fees.
- B8.7 The Fees associated with Preliminary Design shall:
- (a) be a Fixed Fee;
  - (b) include Allowable Disbursements;
  - (c) be entered in column (a) of Form B: Fees.
- B8.8 The Fees associated with Detailed Design shall:
- (a) be a Fixed Fee;
  - (b) include Allowable Disbursements;
  - (c) be entered in column (b) of Form B: Fees.
- B8.9 The Fees associated with Contract Administration shall:
- (a) be a Total Maximum based on Hourly Rates;
  - (b) be based on the number of working days stipulated for the projects listed in Appendix C. The actual working days will be established at time of tender with the consultation and concurrence of the Project Manager. The actual working days will be established during detailed design with consultation and concurrence of the Project Manager. Fees will be adjusted according to the actual number of working days agreed upon;

- (c) include Allowable Disbursements;
- (d) include Fees for supervision of any services anticipated in D4.3.2;
- (e) be entered in column (c) of Form B: Fees.

B8.10 The Fees associated with Post-Construction Services shall:

- (a) be a Total Maximum based on Hourly Rates;
- (b) include Allowable Disbursements;
- (c) be entered in column (d) of Form B: Fees.

B8.11 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.

B8.12 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 The Proposal should describe the experience of the Proponent and any Subconsultants including:

- (a) general firm profile information, including years in business, average volume of work, number of employees, including local office information and other pertinent information for the Proponent and all Subconsultants;
- (b) details demonstrating the history and experience of the Proponent and Subconsultants in providing design, management of construction and contract administration services on a minimum of three projects of similar size and complexity;

B9.2 For each project listed in B9.1, the Proponent should submit:

- (a) description of the project;
- (b) role of the consultant;
- (c) project's original contracted construction cost and final construction cost;
- (d) project owner;

B9.2.1 Where applicable, information should be separated into Proponent and Subconsultant project listings.

B9.2.2 Reference information (two current names with telephone numbers per project) must be made available upon request of the Project Manager.

## **B10. PROJECT MANAGEMENT TEAM PROPOSAL (SECTION D)**

B10.1 The Proposal should describe the proponent's project management approach including:

- (a) Proposals should include a methodology describing your team's project management approach and organization during the performance of Services, so that the evaluation committee has a clear understanding of the methods the Proponent and Subconsultant(s) will use in the delivery of this Project.
- (b) Methodology should identify:
  - (i) job function for each identified individual and group of individuals identified in B10.2(a);
  - (ii) shall include time estimates by work activity and in total, including hourly rates, for each person identified in B10.2(a). Time estimates should also include all staff associated with the project including survey, drafting, clerical and any other support staff. Hourly rates are not required for staff not identified in B10.2(a);
  - (iii) an organizational chart for the Project.



- B10.2 Proposals should include, in tabular form:
- (a) names of key personnel assigned to the Project, who shall not to be substituted without written permission from the Project Manager;
  - (b) the experience and qualifications of the key personnel assigned to the Project, including:
    - (i) job title;
    - (ii) educational background and degrees;
    - (iii) professional affiliation;
    - (iv) years of experience administering projects for the City of Winnipeg;
    - (v) years of experience in current position;
    - (vi) years of experience in design; and
    - (vii) years of experience in construction administration.
  - (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) roles of each key personnel in the Project should be identified in the organizational chart presented in B10.1(b)(iii);
- B10.3 Proposals should include, for each person identified in B10.2(a), a list of at least three projects comparable in scope and complexity, in which the person listed did comparable work and played a comparable role. Provide the following:
- (a) description of project;
  - (b) role of the person;
  - (c) project owner
- B10.4 Further to B10.3, and upon request of the Project Manager, the Proponent must be able to provide, for each person identified in B10.2(a), two current references, including telephone numbers, for each project listed.
- B10.5 Where applicable, information should be separated into Proponent and Subconsultant project listings.
- B10.6 Proposals may also address any other information that conveys the Proponent's understanding of the Project requirements.
- B11. PROJECT UNDERSTANDING AND METHODOLOGY (SECTION E)**
- B11.1 Describe your firm's understanding of Pavement Management Preservation as it relates to:
- (a) Serviceability
  - (b) Service life
  - (c) Functional condition of pavement
- B12. TECHNICAL PROPOSAL (SECTION F)**
- B12.1 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.
- B12.2 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 and urban design issues;
    - (ii) the team's understanding of the proposed Project Estimate and Capital Construction Estimate;

- (b) the Proponent's technical approach and methodology to complete the Services;
- (c) the collaborative process/method to be used by the team in the various phases of the Project;
- (d) all activities and services to be provided by the City;
- (e) the deliverable(s) of the Project;
- (f) any assumptions made with respect to the deliverables and Scope of Services.

B12.3 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.

- (a) Details of the Scope of Services are provided in D4 to D8, as well as Appendix C – Project Locations and Technical Scoping.

### **B13. PROJECT SCHEDULE (SECTION G)**

B13.1 Proponents should present a carefully considered Critical Path Method schedule using Microsoft Project or similar project management software, complete with resource assignments, durations (weekly timescale) and milestone dates or events. The schedule should address each requirement of the Scope of Services.

B13.2 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 should be allowed for completion of these processes, not exceeding time specified in D14.

### **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 his/her 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 Work until a Contract for the Work has been duly executed and the performance security furnished 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 his/her 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) 40%
- (d) Experience of Proponent and Subconsultants; (Section C) 8%
- (e) Project Management Team Proposal; (Section D) 20%
- (f) Project Understanding and Methodology; (Section E) 2%
- (g) Technical Proposal; (Section F) 25%
- (h) Project Schedule. (Section G) 5%

- 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 Project Management Team Proposal 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 B221.1(f), Project Understanding and Methodology will be evaluated considering the proponents understanding of pavement management preservation.
- B21.8 Further to B21.1(h), Technical Proposal will be evaluated considering the Proponent's demonstrated understanding of the Project's technical and functional requirements, and the proposed methodology.
- B21.9 Further to B21.1(h), the Project Schedule will be evaluated considering the Proponent's ability to comply with the requirements of the Project, including, but not limited to, any Critical Stages identified.
- B21.10 Notwithstanding B21.1(d) to B21.1(h), where Proponents fail to provide a response to B6.2(a) to B6.2(e), the score of zero may be assigned to the incomplete part of the response.

## **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 2017 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](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:

Ryan Demianiw, C.E.T.

Telephone No. 204-986-7037

Email Address: rdemianiw@winnipeg.ca

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 The Streets Maintenance Preservation Program is part of the annual Streets Maintenance Operations Budget. Asphalt and Concrete overlays are generally meant to improve drainage, re-establish cross fall, improve rideability and slow down joint deterioration. This maintenance program is meant to improve the rideability and lengthen the overall service life of the pavement.

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

D4.1 The Services required under this Contract shall consist of pavement preservation treatment along:

- (a) Brookside Boulevard Southbound; from Mollard Road to 100m North of Inkster Boulevard;
- (b) Graham Avenue Transit Corridor; Includes: Vaughan Street, Kennedy Street, Edmonton Street and Donald Street Intersections and various spot locations in between these intersections.

D4.2 The Streets Pavement Preservation Program work will include the following phases:

- (a) Project planning and Preliminary Design as outlined in D5;
- (b) Detailed Design and Contract preparation as outlined in D6;
  - (i) design and specification development;
  - (ii) drawing and specification preparation;
  - (iii) procurement process;
- (c) Contract Administration services as outlined in D7;
- (d) Post-Construction services as outlined in D8.

D4.3 Within the Project phases in D4.2, the Consultant may be required – depending upon location and technical scope of services – to conduct site investigation (geotechnical) services, materials testing services, Underground Structures acquisitions, pipeline loading assessments, and/or closed circuit television (CCTV) sewer inspection.



- D4.3.1 Notwithstanding C8, Fees for Subconsultants engaged to perform services in D4.3 shall be payable as invoiced by the Subconsultant, plus an allowed handling fee of 5%.
- D4.3.2 Consultant Fees for supervision of Subconsultants required to perform any services in D4.3 shall be considered as a Contract Administration Service, and included with Fees proposed in B8.9.
- D4.4 The Project Location and Technical Scope of work are provided for in Appendix C.
- D4.4.1 Project Locations are subject to the adoption of the Operating Budget by City Council. Substitutions and/or deletions may occur and may result in an adjustment in Fees as per B8.3.
- D4.4.2 Project Location and Technical Scope is subject to final approval of the Project Manager.
- D4.5 The Consultant is required to prepare and administrate one (1) Bid Opportunity. The Technical Scope of work defined in Appendix C is to be performed under Contract Work to be awarded under one (1) Bid Opportunity.
- D4.6 The Consultant is required to develop in consultation with the Public Works Department detailed Traffic Management and Construction staging plans that will minimize traffic disruption to the public. The approved detailed Traffic Management and Construction staging plan may involve the Consultant to provide Project Management services during off peak traffic times including weekends, evenings and night time. No additional payment will be considered for Contract Administration services during this time.
- D4.6.1 The detailed Traffic Management plans are subject to final approval of the Project Manager.
- D4.7 The Consultant is responsible for:
- (a) Develop technical scope of work;
  - (b) Prepare detailed cost estimates and finalize project budget.
- D4.8 Unless otherwise specified below, Appendix A – Definition of Professional Consultant Services – Engineering – Public Works shall be applicable to the provision of Professional Engineering services for the Project listed in Appendix C

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

- D5.1 Preliminary Design Services associated with the Contract are described in Appendix A-5.
- D5.2 Where applicable, the 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 Tree Planting Details and Specifications Downtown Area and Regional Streets (May 2009);
  - (e) City of Winnipeg's Tree Removal Guidelines;
  - (f) The current edition of The City of Winnipeg Standard Construction Specifications.
  - (g) Section E1, E2, E3 and E4 of Contract Specifications
- D5.3 The Consultant is responsible for:
- (a) In consultation with the Project Manager, determining the extent to which Site investigation is required;
  - (b) Field surveys;

- (c) Acquiring the historical and as-built drawings within Project limits from Underground Structures (where required);
- (d) Engaging the services of appropriate qualified Subconsultant personnel where additional services are required, including, but not limited to: site investigation (geotechnical) services, materials testing services, pipeline loading assessments, and/or closed circuit television (CCTV) sewer inspection.
- (e) Traffic Management and Construction/Repair staging plans that minimize disruption to the public;
- (f) Providing Project details and regular Project updates to the Envista right-of-way coordination system.
- (g) Coordinating work on Graham Avenue Transit Corridor with Winnipeg Transit.

## **D6. DETAILED DESIGN AND CONTRACT PREPARATION**

- D6.1 Detailed Design Services associated with the Contract are described in Appendix A-6.
- D6.2 The Successful Proponent will be responsible for project reporting and support to the City's Project Manager for project reporting in accordance with the City of Winnipeg's Project Management Manual and templates.
- D6.3 Design drawings are not required for this contract.
  - (a) Further to D6.2, this contract will require a detailed site plan for review by the Project Manager and inclusion in the bid opportunity package.
- D6.4 Underground Structure review is not required for this contract.
- D6.5 The Bid Opportunity documents must be prepared:
  - (a) Using the current applicable template from the Materials Management Division;
  - (b) Referencing the current edition of The City of Winnipeg Standard Construction Specifications.

## **D7. CONTRACT ADMINISTRATION**

- D7.1 Contract Administration Services associated with the Contract are described in Appendix A-7.
- D7.2 The Successful Proponent will be responsible for project reporting and support to the City's Project Manager for project reporting in accordance with the City of Winnipeg's Project Management Manual and templates.
- D7.3 Contract Administration Services shall be conducted in accordance with the City's Project Management Manual Appendix E – Contract Administration Procedure.
- D7.4 The Consultant is required to provide NON-RESIDENT Contract Administration Services including but not limited to:
  - (a) Ensuring 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 processing of accurate progress payments and invoices;
  - (c) Conducting pre-award and pre-construction meetings with formal notes.
- D7.5 The Consultant is required to provide RESIDENT Contract Administration Services including but not limited to:
  - (a) Coordination of the day-to-day Site activities;
  - (b) Ensuring construction contractor conformance to the City of Winnipeg's Manual of Temporary Traffic Control;

- (c) Ensuring construction contractor conformance with Public Works Traffic Management Branch;
- (d) Full-time inspection;
- (e) Field and/or laboratory testing and verification of construction/repair material quality;
- (f) Field measurement and verification of construction/repair material quantities in a manner so as to minimize contract disputes;
- (g) 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 Project Management Manual;
  - (ii) Other formal and/or informal documented means;
- (h) 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);
- (i) On-going updates to the lane-closure information line as required;
- (j) Supervision of Subconsultants required to perform any services under D5.3(d);
- (k) Provision of Project details and regular Project updates to the Envista right-of-way coordination system;
- (l) Present data in Final Report

## **D8. POST-CONSTRUCTION**

- D8.1 Post-Construction Services associated with the Contract are described in Appendix A-8.
- D8.2 The Successful Proponent will be responsible for project reporting and support to the City's Project Manager for project reporting in accordance with the City of Winnipeg's Project Management Manual and templates.
- D8.3 Record Drawings are not required for this contract.
- D8.4 The Consultant is required to provide Post-Construction Services including but not limited to:
- (a) Preparation of the following:
    - (i) Certificate of Substantial Performance;
    - (ii) Certificate of Total Performance; and
    - (iii) Certificate of Acceptance.
  - (b) Additional Contract Administration for maintenance (pay) items within the warranty period of the construction contract;
  - (c) Resolution of deficiencies and/or outstanding warranty issues;
  - (d) Submission of a final construction report within three months of Substantial Performance of the construction contract, including:
    - (i) Summary report – a brief (three to five page) description of:
      - ◆ Services accomplished, including initial and final scope of Project;
      - ◆ Summary of different types of preservation work completed;
      - ◆ For each Project Location the amount of concrete repairs by percentage of surface;
      - ◆ Issues encountered and resolutions achieved;
      - ◆ Summary of Asphalt tonnages used Mainline and Shoulder Paving at each Project location;
      - ◆ Any outstanding services or issue-resolutions required;
      - ◆ Final or projected final contract cost per each project location;

- ◆ Daily field reports (as an appendix);
- ◆ Field test reports (as an appendix)
- (ii) Photographs – total minimum of 12, maximum of 20; 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)
  - ◆ approximately six (6) typical pre-construction photos;
  - ◆ approximately six (6) typical Post-construction photos; and
  - ◆ approximately six (6) typical construction operation photos (e.g. concrete pour, paving operation).

## D9. DEFINITIONS

D9.1 When used in this Request for Proposal:

- (a) “**Pavement Preservation**” means surface works on concrete or asphalt roadways that assist the pavement structure in meeting or prolonging its useful life.
- (b) “**Capital Construction Estimate**” means the estimated value of the Construction Contract to be administered by the Consultant. The Capital Construction Estimate is only provided as an estimate of scale and scope for the Project.
- (c) “**Estimated Scope**” means the scope of Services upon which the Project Estimate was based.
- (d) “**Local Street**” means an open (traversable) right-of-way that is not identified in Schedule E of the most recent City of Winnipeg Streets By-law No. 1481/77 (i.e. not a Regional Street).
- (e) “**Project Budget**” means the total available funding required for Project Location, including construction (Contract) costs (based on the Estimated Scope), utility costs, Consulting Fees, and any associated costs identified in the additional comments of a project.
- (f) “**Project Location**” means an individual Right-of-Way location (typically Street, Alley, Sidewalk, Intersection, or Path) identified to make up a whole Project.
- (g) “**Regional Street**” means those streets listed in Schedule E of the most recent City of Winnipeg Streets By-law No. 1481/77.
- (h) “**Asphalt Overlay**” means minor pavement and curb repairs, renewal of curb ramps, and an asphalt overlay. These repairs will assist the pavement structure in meeting or prolonging its useful life.
- (i) “**Concrete Overlay**” means minor pavement and curb repairs, renewal of curb ramps, and a concrete overlay. These repairs will assist the pavement structure in meeting or prolonging its useful life.
- (j) “**Concrete Pavement Preservation**” means minor pavement repairs including partial and full depth repairs. These repairs will assist the pavement structure in meeting or prolonging its useful life.
- (k) “**Partial Depth Repair**” or “**PDR**” means small shallow areas of deteriorated concrete that is replaced with suitable repair material. These repairs will assist the pavement structure in meeting or prolonging its useful life.

## D10. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

- D10.1 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.
- D10.2 The Consultant shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Project Manager.

- D10.3 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.
- D10.4 A Consultant who violates any provision of D10 may be determined to be in breach of Contract.

## **SUBMISSIONS**

### **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 Consultant shall procure and maintain, at its own expense and cost, insurance policies with limits no less than those shown below.
- D12.2 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 \$ 2,000,000.00 . per claim and \$ 2,000,000.00 in the aggregate.
- D12.2.1 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.

- D12.3 The policies required in D12.2(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.
- D12.4 The Consultant shall require each of its Subconsultants to provide comparable insurance to that set forth under D12.2(a) and D12.2(c).
- D12.5 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 D12.8.
- D12.6 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.
- D12.7 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.
- D12.8 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**

### **D13. COMMENCEMENT**

- D13.1 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.
- D13.2 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;
  - (b) the Consultant has attended a meeting with the Project Manager, or the Project Manager has waived the requirement for a meeting.
- D13.3 The City intends to award this Contract by March 24, 2017.

### **D14. CRITICAL STAGES**

- D14.1 The Consultant shall achieve critical stages of the Services for this Contract in accordance with the following requirements:
- (a) Substantial Performance of the Construction Contract by September 22, 2017;
  - (b) Total Performance of the Construction Contract by October 6, 2017
  - (c) With Exception to D14.1 (a) and D14.1 (b), Total Performance of Construction at All locations on Graham Avenue (as seen in Form B) shall be achieved by July 21, 2017 due to Canada Summer Games.
- D14.2 Further to C1.1(tt), Total Performance for this Contract will be after the issuance of the Certificate of Acceptance for the construction contract which is typically:
- (a) one (1) year from the Total Performance date.

### **D15. MEASUREMENT AND PAYMENT**

- D15.1 Further to C10, the Consultant shall submit monthly invoices to the Project Manager.

- D15.2 Invoices must clearly indicate:
- (a) the City's purchase order number;
  - (b) project file number;
  - (c) a breakdown of:
    - (i) Preliminary Design Fees;
    - (ii) Detailed Design Fees;
    - (iii) Contract Administration Fees including hours and hourly rates for Services provided in the invoice period;
      - ◆ Allowable Disbursements shall be identified separately on each invoice.
    - (iv) Post Construction Service Fees including hours and hourly rates for Services provided in the invoice period;
      - ◆ Allowable Disbursements shall be identified separately on each invoice.
    - (v) Other Project costs and Subconsultant Fees in accordance with D4.3 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.
- D15.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.
- D15.4 Invoices must be submitted to the City of Winnipeg Public Works, Streets Maintenance Division at 104-1155 Pacific Avenue

## **PART E - SPECIFICATIONS (ADDITIONAL REQUIREMENTS)**

### **E1. GUIDELINE FOR ASPHALT OVERLAY PRESERVATION METHOD**

#### **E1.1 PURPOSE OF TREATMENT**

- (a) The Asphalt Overlay treatment is a preventative method to extend pavement life, improve ride and drainage.
- (b) Applicable to existing concrete streets in fair condition.

E1.2 Scope of Asphalt Overlay work includes minimal curb, sidewalk and pavement repairs, minor adjustments and placement of asphalt overlay in the least possible time and inconvenience to the public.

#### **E1.3 SELECTION CRITERIA**

##### **E1.3.1 Pavement condition**

- (a) General Condition – Fair;
- (b) Fair ride;
- (c) Fair to good drainage;
- (d) Defined by Public Works asset management system and confirmed by Site inspection.

##### **E1.3.2 Underground works**

- (a) General review of sewer and water by Water and Waste to identify problems that must be corrected and to coordinate underground rehabilitation projects if required;
- (b) Inspection of existing catchbasin condition;
- (c) Operation and checking mainline water valves by Water and Waste.

##### **E1.3.3 Utilities**

- (a) Renewal of street lighting, gas, MTS and signal plant not included.

##### **E1.3.4 Design life**

- (a) 10 to 15 Years

#### **E1.4 CONSTRUCTION METHOD SUMMARY**

##### **E1.4.1 Joint and slab repairs**

- (a) Type A repairs for catchbasins and manhole where adjustments are required;
- (b) Final Concrete Restoration of any Temporary Utility Cuts;
- (c) Localized joint and slab replacement (areas to be repaired must be unstable and have extensive cracking). Total replacement area less than 5% of total pavement area;
- (d) All repairs shall be completed utilizing 24 or 72 hour Concrete for Early Opening.

##### **E1.4.2 Milling and asphalt patching joints**

- (a) Use cold mill planner to remove unstable concrete to dowels;
- (b) Thoroughly clean milled joints by mechanical means and/or compressed air;
- (c) Apply tack coat and Type 1A Asphalt to existing concrete surface.

##### **E1.4.3 Joint sealing**

- (a) Not required prior to placement of asphalt overlay;
- (b) Include Reflective Crack Sealing during Warranty Period.



- E1.4.4 Planning
- (a) headers at tie-ins to existing asphalt overlays.
- E1.4.5 Adjustments
- (a) Use rings for catch basins and manhole adjustment;
  - (b) Adjust manholes and catch basins to match proposed grade and cross fall
  - (c) Design asphalt overlay to match Hydro and MTS manhole available riser sizes;
  - (d) For manhole or catchbasins that require adjustment, remove and replace pavement;
  - (e) Replace damaged or worn covers and lifters rings;
  - (f) Install lifter rings on manholes and catchbasins to accommodate design asphalt overlay elevation;
  - (g) Adjust or Install Water Valve Extensions to accommodate design asphalt overlay elevation.
- E1.4.6 Curbs and sidewalk renewal
- (a) Replace missing curbs and renew curbs that are severely deteriorated or dangerous;
  - (b) Finish curb height;
    - (i) Preferred – 100mm
    - (ii) Minimum – 75mm
  - (c) Replace existing barrier curb at Intersections and approaches with modified barrier curb only when curb condition requires replacement;
  - (d) For curb ramps;
    - (i) Missing curbs
    - (ii) Severely deteriorated condition
    - (iii) Correction of orientation
    - (iv) New ramps replacing barrier curb
    - (v) Design asphalt overlay elevation
  - (ii) Localized sidewalk repairs, only when sunken or heaved locations and vertical faults or horizontal cracks or joints greater than 10mm. Locations must be approved by Public Works.
- E1.4.7 Approaches
- (a) Place asphalt overlay as required to match design asphalt overlay elevation.
- E1.4.8 Boulevard restoration
- (a) Restore boulevard at replaced curb and sidewalk with topsoil and seed;
  - (b) Restoration to be accepted at final inspection without formal maintenance inspection;
  - (c) All boulevard restoration must be completed prior to placement of asphalt overlay.
- E1.4.9 Placement of asphalt overlay
- (a) Place 75-80mm, in two lifts, with final lift being 50mm;
  - (b) New curb must be in place for a minimum of 1 day prior to placement of asphalt overlay
  - (c) Longitudinal grade:
    - (i) Minimum – 0.3%
    - (ii) Preferred – 0.4 to 0.5%
  - (d) Pavement cross fall:
    - (i) Minimum – 1.5%
    - (ii) Preferred – 2.0%

E1.4.10 Utilities

- (a) Co-ordination with all affected utilities required.

**E2. GUIDELINE FOR CONCRETE PAVEMENT PRESERVATION METHOD**

E2.1 PURPOSE OF TREATMENT

- (a) Concrete Pavement Preservation is a preventative method meant to assist the original construction in meeting or prolonging the concrete pavements useful life.
- (b) Applicable to existing concrete streets in good or fair condition.

E2.2 Scope of Concrete Pavement Preservation work includes partial depth repair, full depth patching of existing slabs and joints, utility isolation adjustments, minor curb repairs, diamond grinding and joint and crack sealing in the least possible time and inconvenience to the public

E2.3 SELECTION CRITERIA

- (a) Pavement condition
  - (i) General Condition – Fair
  - (ii) Fair ride
- (b) Defined by Public Works asset management system and confirmed by Site inspection
  - Underground works
    - (i) General review of sewer and water by Water to identify problems that must be corrected and to coordinate underground rehabilitation projects if required
    - (ii) Inspection of existing catchbasin condition
    - (iii) Operation and checking mainline water valves by Water and Waste
- (c) Utilities
  - (i) Renewal of street lighting, gas, MTS and signal plant not included
- (d) Design life
- (e) 10 to 15 Years

E2.4 CONSTRUCTION METHOD SUMMARY

E2.4.1 Partial depth repairs

- (a) Replaces and repairs deteriorated concrete and certain types of pavement distresses in the top one third of the pavement. Most often corrects spalling and other defects/distresses along the concrete pavement joints.
- (b) When the repair extends beyond the top one third of the slab and/or extends to the load transfer steel partial depth repair is no longer applicable.

E2.4.2 Joint and slab repairs

- (a) Type A repairs for catchbasins and manholes where adjustments are required;
- (b) Final Concrete Restoration of any Temporary Utility Cuts;
- (c) Joint and slab replacement to correct localized defects;
- (d) Consultant to analyze/interpret IRI reports (where available from Public works Department) to determine if slab replacement is necessary in order to achieve the desired IRI.
- (e) All repairs shall be completed utilizing 24 or 72 hour Concrete of Early Opening.

E2.4.3 Curbs and sidewalk renewal

- (a) Replace missing curbs and renew curbs that are severely deteriorated or dangerous;
- (b) Localized sidewalk repairs, only when sunken or heaved locations and vertical faults or horizontal cracks or joints greater than 10mm. Locations must be approved by Public Works.

- E2.4.4 Boulevard restoration
  - (a) Restore boulevard at replaced curb and sidewalk with topsoil and seed;
  - (b) Restoration to be accepted at final inspection without formal maintenance inspection.
- E2.4.5 Diamond Grinding
- E2.4.6 Joint sealing
- E2.4.7 Utilities
  - (a) Co-ordination with all affected utilities required.

**E3. PARTIAL DEPTH CONCRETE REPAIR SPECIFICATION**

**E3.1 DESCRIPTION**

E3.1.1 This Specification shall cover all operations relating to partial depth concrete repairs of concrete pavement joints. The work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

**E3.2 Referenced Standard Construction Specifications**

- (a) CW 3310 – Portland Cement Concrete Pavement Works.

**E3.3 MATERIAL**

E3.3.1 Patching Material to be used for the partial depth repairs is Five Star Highway Patch or VersaSpeed. This material shall be covered and kept out of direct sunlight when being stored. No substitutions are allowed for this material.

**E3.3.2 PATCHING MATERIAL MIX DESIGN (ALTERNATIVE 1)**

- (a) Mixing water used for batching cementitious patching material will be clean and potable water. Water used for mixing must not exceed 25° Celsius.
- (b) The cementitious patching material may be extended by the addition of coarse aggregate meeting the gradation requirements of the table below. The material may be extended to a maximum of 50% by weight of cementitious material.
- (c) Batching of material to be conducted as per manufacturers instruction

Aggregate Extender Gradation	
Sieve [mm]	% Passing
10.0	100
5.0	0 - 15
2.5	0 - 5
0.080	0 - 1

**E3.3.3 PATCHING MATERIAL MIX DESIGN (ALTERNATIVE 2)**

- (a) Alternative Patching Material Mix Design to Alternative 1 meeting all of the requirements listed below will be considered and reviewed by the Project Manager for acceptance as a Patching Material.
  - (i) The Alternate Patching Material Mix Design shall be performed by a certified third party laboratory according to CSA A23.1 Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practice for Concrete.
  - (ii) The proportioning, volumetric and physical properties of the Mix Design will be submitted to the Project Manager for review prior to acceptance.
  - (iii) Aggregates must conform to Table 12 of CSA A23.1 Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practice for Concrete.

Patching Material Mix Design (Alternative 2) Performance Criteria			
Compressive Strength	CSA A23.2-9C	2 hours	13.0 MPa
		3 hours	24.0 MPa
		24 hours	34.0 MPa
		7 days	48.0 MPa
Length Change	ASTM C157	Air Storage	< 500 microstrains
Chloride Ion Permeability	ASTM C1202	Very Low	100 – 1000 Colomb
Time of Set	ASTM C403		< 1.5 hours
Resistance to Salt-Frost Scaling	ASTM C672	After 50 cycles	< 0.1 kg/m <sup>2</sup>
Air Content	CSA A23.2-4C		5 - 8 %

E3.3.4 Curing Compound

- (a) The Curing Compound will be Type 2, white-pigmented and water based liquid membrane forming curing in accordance with ASTM C309.

E3.3.5 Bond Breaker

- (a) Bond Breaker shall be Styrofoam (6.5 ± .5 mm thick) or waxed cardboard or other suitable product approved by the Project Manager.

E3.4 EQUIPMENT

E3.4.1 Chipping hammers shall be either Hilti TE 905 electric driven or if using air driven hammers, shall be less than or equal to 13.5 kg, combined with sharp chipping tempered hammer bits.

E3.4.2 Sand blasting equipment shall be air compressor operated with a nozzle size matched to the air compressor pressure. Preferred equipment is:

- (a) Clemco Model 2020 with a #4 nozzle on a dolly using Black Diamond 20/40 grit at an operating pressure of 110 PSI
- (b) Acceptable sand blasting equipment:
- (i) Clemco Model 1042 using fine silica sand at an operating pressure of 100 PSI.

E3.4.3 An oil free jetted air compressor shall be used to blow out repairs, vacuum will not be acceptable.

E3.4.4 Quickie Saw, capable of holding 2-14" diamond tip blades and must be used in conjunction with a cart to make long straight cuts.

E3.4.5 A mason's hammer for sounding concrete.

E3.4.6 Calibrated 3 litre (2.84 quart) water container.

E3.5 CONSTRUCTION METHODS

E3.5.1 Remove any existing AMZ or asphaltic material if applicable from the concrete surface adjacent to the area to be repaired.

E3.5.2 Sawcut the repair edge a minimum width of 25 mm beyond the edge of the deteriorated concrete, to a minimum depth of 25 mm. Sawcuts shall be made parallel to the joint. No diagonal cuts are allowed. For pavements where deterioration is observed 50 mm or less in depth, a 12 mm edge sawcut can be utilized.

E3.5.3 Remove existing sealant 100 mm beyond the ends of the repair.

- E3.5.4 Remove all loose or deteriorated concrete with either an electric or air driven 13.5 kg chipping hammer without damaging the saw cut or existing joint. If during removal, damage occurs beyond the sawcut, remove the concrete at a 45° angle down to the joint. A new sawcut is not required.
- E3.5.5 Sound the concrete using sight, sound and feel with a mason's hammer to determine the presence of additional deteriorated concrete. Complete additional removal of any unsound concrete, as stated above.
- E3.5.6 If any of the following conditions are present in a concrete joint, repairs should be completed as a full depth repair:
- (a) Vertical displacement of the concrete slab by more than 5mm;
  - (b) Corrosion of the tie bars or dowels;
  - (c) Concrete deterioration is present to the bottom or around the existing tie bars or dowels;
  - (d) Improper layout of original pavement joints.
- E3.5.7 Sawcut 6 mm wide along the existing joint, to a depth of 10mm below the deepest part of the deteriorated concrete or to the depth of the steel. The saw cut shall extend the full length of the repair area. Do not cut the steel.
- E3.5.8 Sandblast the concrete surface of the repair area, the saw cut run-outs and 25mm beyond the perimeter of the repair area to ensure that the concrete surface is rough and clean. The Contractor shall be responsible for protecting traffic during sandblasting.
- E3.5.9 Use compressed air that has an oil free air jet having sufficient volume and pressure to remove dust and loose particles.
- E3.5.10 Place a 6 mm bond breaker to the full length and depth of the saw cut to match the pavement surface. The bond breaker shall extend 50 mm beyond the edge of the repair.
- E3.5.11 Mix the concrete repair material in accordance with the manufacturer's guidelines and according to the following instructions:
- (a) Material and water are to be stored in an enclosed vehicle or facility.
  - (b) Water for mixing must be no more than 25° Celsius and must be clean and potable. If the mix temperature is greater than 25° Celsius bags of cubed ice shall be used for mixing in the water. Bags shall remain intact to keep the ice cubes from mixing in the water.
  - (c) Remove old mix material from the pail by scraping the bucket after every batch.
- E3.5.12 The existing concrete surface shall be misted until immediately prior to placement of the repair material. If the temperature of the concrete is too high place ice in the hand sprayer to reduce the temperature.
- E3.5.13 Place the concrete repair material according to the following instructions:
- (a) Place the repair material on both sides of the bond breaker at the same time. The bond breaker must remain straight during placement of the repair material.
  - (b) Start placing repair material on the high side of the joint if possible. Plan the placement so there will be a minimum number of ends of active material where continuous placement is happening.
  - (c) Do not do partial fill with a layer on the bottom between batches. Only bulkhead a cold joint. If a cold joint is placed, sand blast before butting new material against the bulkhead. Create a cold joint by striking off vertically and removing excess repair material. To keep more than one joint active when more than one head of material is being worked on, use part of each succeeding batch to extend the working time of each active repair material head.
  - (d) To finish a repair, strike off material with the edge of a trowel flush with the existing concrete and finish with a steel trowel.

- (e) Do not add additional water during mixing or after mixing as it will result in strength loss of the repair material.
- (f) Use minimal motions to finish the surface. Overworking will result in scaling or spalling of the repair surface.
- (g) The finished concrete shall be flush with the adjacent existing concrete.

E3.5.14 Saw cut run-outs shall be filled with concrete repair material.

E3.5.15 Uniformly apply water based white pigmented curing compound once the material has set up.

E3.5.16 Sawcut the width and depth to match the existing pavement joint reservoir and reseal.

#### E3.6 MEASUREMENT AND PAYMENT

E3.6.1 Construction of Partial Depth Concrete Repairs will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Partial Depth Concrete Repairs". The area to be paid for will be the total number of square meters of partial depth concrete repairs supplied and placed in accordance with this specification and accepted by the Project Manager, including all materials and operations herein described and all other items incidental to the Work included in this Specification. Any partial depth repair that is less than 0.03 m<sup>2</sup> shall be measured as 0.03 m<sup>2</sup>.

### E4. BONDED CONCRETE OVERLAY SPECIFICATION

E4.1.1 This Specification shall cover all operations relating to bonded concrete overlays placed over existing concrete pavement. The work to be done by the Contractor under this Specification shall include the furnishing of all superintendence, overhead, labour, materials, equipment, tools, supplies and all other things necessary for and incidental to the satisfactory performance and completion of all work as hereinafter specified.

E4.2 Referenced Standard Construction Specifications

- (a) CW 3310 – Portland Cement Concrete Pavement Works.

#### E4.3 DEFINITION

E4.3.1 "Bonded Concrete Overlay" means a relatively thin concrete layer bonded to an existing pavement that forms a monolithic pavement. The purpose of bonded concrete overlays is to add structural capacity and eliminate surface distresses on existing pavements that are in good to fair condition.

#### E4.4 DESIGN

##### **Overlay Thickness**

E4.4.1 Overlay thickness shall match adjacent pavement grade with an approximate thickness of 93 mm.

##### **Joint**

E4.4.2 Longitudinal joints shall not align with wheel path.

E4.4.3 Transverse and longitudinal joints shall be full depth plus 13mm.

E4.4.4 Overlay joint width shall be equal to or greater than crack in existing slab.

#### E4.5 MATERIAL

E4.5.1 All concrete materials shall conform to the requirements of section 5, 6 and 7 of CW3310 shall cover the preparation of Portland Cement Concrete for, and all concreting operations relating to, the construction of Bonded Concrete Overlay works.

E4.5.2 Curing Compound

- (a) The Curing Compound will be Type 2, white-pigmented and water based liquid membrane forming curing in accordance with ASTM C309.

#### E4.6 EQUIPMENT

- E4.6.1 All equipment shall conform to the requirement of section 8 of CW3310 as required by or directed by the Contract Administrator.
- E4.6.2 Sand blasting equipment shall be air compressor operated with a nozzle size matched to the air compressor pressure. Acceptable sand blasting equipment:
  - (a) Clemco Model 2020 with a #4 nozzle on a dolly using Black Diamond 20/40 grit at an operating pressure of 110 PSI
- E4.6.3 An oil free jetted air compressor shall be used to blow out repair area, vacuum will not be acceptable.
- E4.6.4 Bull Float shall be constructed of wood and shall be approved for use by the Contract Administrator prior to construction. The use of magnesium floats is not permitted.

#### E4.7 CONSTRUCTION METHODS

- E4.7.1 All construction methods shall conform to the requirement of section 9 of CW3310 as required by or directed by the Contract Administrator.

##### **Removal of Paving Stones**

- E4.7.2 Remove all existing concrete paver stones from the concrete surface area which is to be bonded with a concrete overlay. Remove all loose debris including sand bedding and any other aggregates or foreign elements remaining on the existing concrete surface.

##### **Preoverlay Repairs for Uniform Support**

- E4.7.3 Remove all loose or deteriorated concrete with either an electric or air driven 13.5 kg chipping hammer without damaging the saw cut or existing joint.
- E4.7.4 If any of the following conditions are present in a concrete joint or slab, repairs should be completed as a full depth repair:
  - (a) Vertical displacement of the concrete slab by more than 5mm;
  - (b) Cracking greater than 25mm in width
  - (c) Extreme Map Cracking, D-Cracking, or Branch Cracking

##### **Surface Preparation**

- E4.7.5 Sandblast the concrete surface of the repair area, and 25mm beyond the perimeter of the repair area to ensure that the concrete surface is rough and clean. The Contractor shall be responsible for protecting traffic during sandblasting.
- E4.7.6 Use compressed air that has an oil free air jet having sufficient volume and pressure to remove dust and loose particles.
- E4.7.7 Maintain a clean and water saturated surface directly ahead of the concrete-placing operations.

##### **Concrete Placement**

- E4.7.8 Place the concrete material as follows:
  - (a) Start placing repair material (as per CW3310) on the high side of the joint if possible.
  - (b) The Concrete shall be vibrated according to specification.
  - (c) The finished concrete shall be flush with the adjacent existing concrete surface.
- E4.7.9 Uniformly apply water based white pigmented curing compound immediately after placement of concrete.
- E4.7.10 Concrete overlay shall not contain tie-bars or dowels.

### **Joints**

- E4.7.11 Sawcut the joints to match the location and width of existing pavement joints beneath the bonded concrete overlay.
- E4.8 **QUALITY ASSURANCE**
- E4.8.1 All quality assurance shall conform to the requirement of section 9 of CW3310 as required by or directed by the Contract Administrator.
- E4.9 **MEASUREMENT AND PAYMENT**
- E4.9.1 Construction of Bonded Concrete Overlay will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Bonded Concrete Overlay". The area to be paid for will be the total number of square meters of bonded concrete overlay supplied and placed in accordance with this specification and accepted by the Project Manager, including all materials and operations herein described and all other items incidental to the Work included in this Specification. The removal and disposal of existing concrete paving stones and bedding sand shall be included in the Contract Unit Price per square metre for "Bonded Concrete Overlay".