



THE CITY OF WINNIPEG

REQUEST FOR PROPOSAL

RFP NO. 1294-2019

**REQUEST FOR PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES FOR
2020 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 2020 STREETS MAINTENANCE PRESERVATION PROGRAM

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, January 30, 2020

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 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.

B3.4 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.

B3.5 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.

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

B4. CONFIDENTIALITY

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

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

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

B5. ADDENDA

- B5.1 The Project Manager may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Request for Proposal, or clarifying the meaning or intent of any provision therein.
- B5.2 The Project Manager will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B5.3 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>
- B5.4 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.
- B5.5 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.
- B5.6 Notwithstanding B3, enquiries related to the Addendum may be directed to the Project Manager identified in D2.

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) Form P: Person Hours (Section B) in accordance with B8.
 - (b) Experience of Proponent and Subconsultants (Section C) in accordance with B9;
 - (c) Project Management Team Proposal (Section D), in accordance with B10;
 - (d) Project Understanding and Methodology (Section E) in accordance with B11;
 - (e) Technical Proposal (Section F) in accordance with B12; and
 - (f) 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.
- B6.5 Proponents should submit one (1) unbound 8.5" x 11" Proposal. Copies are not required. Drawings, charts and tables etc. included as part of the Proposal should not exceed 11" x 17" (ledger) size.
- 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 B6.1 and B6.2.
 - (b) The Proposal(s) should 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 should be no

more than twelve (12) pages in length exclusive of the required form(s). Only the first twelve (12) 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 twelve (12) 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 B22.1(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 12 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 Proposal shall include a Fixed Fee for all disciplines and/or phases identified in D4 Scope of Services.

B8.2 The Proponent shall complete Form B: Fees, summarizing all applicable Fees.

B8.3 The Proponent should complete all sections of Form P: Person Hours, summarizing all applicable Fees, Key Personnel, Support Staff, Hourly Rates and Allowable Disbursements.

B8.4 The Proposal shall include the Total Fees for all disciplines and/or phases identified in D4 Scope of Services. The Project Package being bid on includes:

- (a) Project Planning and Preliminary Design;
- (b) Detailed Design and Contract (Bid Opportunity) Preparation;
- (c) Contract Administration services; and
- (d) Post-Construction services.

B8.5 Adjustments to Fees will only be considered based on increases to the Scope of Services.

B8.5.1 The City will not consider an adjustment to the Fees based on changes in the Project budget or the Final Total Construction Cost.

B8.6 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.

B8.7 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.

B8.7.1 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;

B8.7.2 Further to D14.2(c)(iii) and D14.2(c)(iv), the Allowable Disbursements shall be identified separately on each invoice.

B8.8 The Proposal should include the Fees to be assessed for Engineering and other Services as defined in the Scope of Services. The Fees should be included in Form P: Personal Hours with descriptions and summarized in Form B: Fees.

B8.9 The Fees associated with Preliminary Design should:

- (a) be a Fixed Fee;
- (b) include Allowable Disbursements;
- (c) be entered in column (a) of Form B: Fees.
- (d) be entered in Form P: Personal Hours

- B8.10 The Fees associated with Detailed Design should:
- (a) be a Fixed Fee;
 - (b) include Allowable Disbursements;
 - (c) be entered in column (b) of Form B: Fees.
 - (d) be entered in Form P: Personal Hours
- B8.11 The Fees associated with Contract Administration should:
- (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.
 - (f) be entered in Form P: Personal Hours
- B8.12 The Fees associated with Post-Construction Services should:
- (a) be a Total Maximum based on Hourly Rates;
 - (b) include Allowable Disbursements;
 - (c) be entered in column (d) of Form B: Fees.
 - (d) be entered in Form P: Personal Hours
- B8.13 Notwithstanding C11.1, 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.
- B8.14 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:
- (a) details demonstrating the history and experience of the Proponent and Subconsultants in providing programming; design, management of the project and contract administration services on three projects of similar complexity, scope and value.
- B9.2 For each project listed in B9.1(a), the Proponent should submit:
- (a) description of the project;
 - (b) role of the consultant;
 - (c) project's original contracted cost and final cost;
 - (d) design and schedule (anticipated Project schedule and actual project delivery schedule, showing design separately);
 - (e) project owner;
 - (f) reference information (two current names with telephone numbers per project).
- B9.2.1 Where applicable, information should be separated into Proponent and Subconsultant project listings.

- B9.3 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. PROJECT MANAGEMENT TEAM PROPOSAL (SECTION D)

- B10.1 Describe your approach to overall team formation and coordination of team members.
- B10.1.1 Include an organizational chart for the Project.
- B10.2 Identify the following Key Personnel assigned to the Project:
- (a) project manager;
 - (b) contract administrator;
 - (c) lead designer;
 - (d) resident inspector;
 - (e) non-resident inspector
- B10.3 Effective January 1, 2018, the City reserves the right to stipulate that any projects that include Public Engagement work will require that all Public Engagement work be performed by a public engagement professional who has completed the Foundations in Public Participation offered by IAP2.
- B10.4 Submit the experience and qualifications of the Key Personnel assigned to the Project for projects of similar complexity, scope and value, 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 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 B10.1.1.
- B10.5 For each person identified, list at least two comparable projects in which they have played a primary role similar to that proposed for this Project. If a project selected for a key person is included in B10.2, provide only the project name and the role of the key person. For other projects provide the following:
- (a) Description of project;
 - (b) Role of the person;
 - (c) Project Owner;
 - (d) Reference information (two current names with telephone numbers per project).

B11. PROJECT UNDERSTANDING AND METHODOLOGY (SECTION E)

- B11.1 Describe your firm's understanding of Pavement Preservation as it relates to:
- (a) Project location selection;
 - (b) The role of preservation as it relates to life cycle;
 - (c) The scope of preservation work.
- B11.2 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.

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.

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 D13.

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. CONFLICT OF INTEREST AND GOOD FAITH

B15.1 Proponents, by responding to this RFP, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.

B15.2 Conflict of Interest means any situation or circumstance where a Proponent or Key Personnel proposed for the Work has:

- (a) other commitments;
- (b) relationships;
- (c) financial interests; or
- (d) involvement in ongoing litigation;

that could or would be seen to:

- (i) exercise an improper influence over the objective, unbiased and impartial exercise of the independent judgment of the City with respect to the evaluation of Proposals or award of the Contract; or
 - (ii) compromise, impair or be incompatible with the effective performance of a Proponent's obligations under the Contract;
- (e) has contractual or other obligations to the City that could or would be seen to have been compromised or impaired as a result of its participation in the RFP process or the Project; or
- (f) has knowledge of confidential information (other than confidential information disclosed by the City in the normal course of the RFP process) of strategic and/or material relevance to the RFP process or to the Project that is not available to other proponents and that could or would be seen to give that Proponent an unfair competitive advantage.

B15.3 In connection with its Proposal, each entity identified in B15.2 shall:

- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Project;
- (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the RFP process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Project Manager; and
- (c) provide the City with the proposed means to avoid or mitigate, to the greatest extent practicable, any perceived, potential or actual Conflict of Interest and shall submit any additional information to the City that the City considers necessary to properly assess the perceived, potential or actual Conflict of Interest.

B15.4 Without limiting B15.3, the City may, in its sole discretion, waive any and all perceived, potential or actual Conflicts of Interest. The City's waiver may be based upon such terms and conditions as the City, in its sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Proponent to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in its sole discretion, to avoid or mitigate the impact of such Conflict of Interest.

B15.5 Without limiting B15.3, and in addition to all contractual or other rights or rights at law or in equity or legislation that may be available to the City, the City may, in its sole discretion:

- (a) disqualify a Proponent that fails to disclose a perceived, potential or actual Conflict of Interest of the Proponent or any of its Key Personnel;
- (b) require the removal or replacement of any Key Personnel proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in its sole discretion, determines cannot be avoided or mitigated;
- (c) disqualify a Proponent or Key Personnel proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B15.4 to avoid or mitigate a Conflict of Interest; and
- (d) disqualify a Proponent if the Proponent, or one of its Key Personnel proposed for the Project, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.

B15.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in its sole discretion.

B16. QUALIFICATION

B16.1 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.
- B16.2 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>
- B16.3 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.
- B16.4 (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.
- B16.5 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.
- B17. OPENING OF PROPOSALS AND RELEASE OF INFORMATION**
- B17.1 Proposals will not be opened publicly.
- B17.2 After award of Contract, the names of the Proponents and the Contract amount of the successful Proponent and their address(es) 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/>
- B17.3 The Proponent is advised any information contained in any Proposal Submission may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).
- B17.3.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Proposal Submission identified by the Proponent as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.
- B17.4 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.

B18. IRREVOCABLE OFFER

- B18.1 The Proposal(s) submitted by the Proponent shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.
- B18.2 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 for the time period specified in Paragraph 10 of Form A: Proposal.

B19. WITHDRAWAL OF OFFERS

- B19.1 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.
- B19.1.1 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.
- B19.1.2 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 12 of Form A: Proposal, and only such person, has authority to give notice of withdrawal.
- B19.1.3 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 12 of Form A: Proposal; and
 - (c) if the notice has been given by any one of the persons specified in B19.1.3(b), declare the Proposal withdrawn.
- B19.2 A Proponent who withdraws its Proposal after the Submission Deadline but before its offer has been released or has lapsed as provided for in B18.2 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.

B20. INTERVIEWS

- B20.1 The Project Manager may, in his/her sole discretion, interview Proponents during the evaluation process.

B21. NEGOTIATIONS

- B21.1 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.
- B21.2 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.
- B21.3 If, in the course of negotiations pursuant to B21.2, 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.

B22. EVALUATION OF PROPOSALS

B22.1 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 B16: (pass/fail)
- (c) Fees; (Section B) 40%
- (d) Experience of Proponent and Subconsultant; (Section C) 10%
- (e) Project Management Team Proposal; (Section D) 15%
- (f) Project Understanding and Methodology (Section E) 10%
- (g) Technical Proposal. 20%
- (h) Project Schedule. (Section F) 5%

B22.2 Further to B22.1(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.

B22.3 Further to B22.1(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.

B22.4 Further to B22.1(c), Fees will be evaluated based on Fees submitted in accordance with B8.

B22.5 Further to B22.1(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, in accordance with B9.

B22.6 Further to B22.1(e), 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, in accordance with B10.

B22.7 Further to B22.1(f), Project Understanding and Methodology will be evaluated considering your firm's understanding of the City's Project, project management approach and team organization, in accordance with B11.

B22.8 Further to B22.1(g), Technical Proposal will be evaluated considering the Proponent's ability to comply with the requirements of the Project, in accordance with B12.

B22.9 Further to B22.1(h), Project Schedule will be evaluated considering the Proponent's ability to comply with the requirements of the Project, in accordance with B13.

B22.10 Notwithstanding B22.1(d) to B22.1(h), where Proponents fail to provide a response to B6.2(a) to B6.2(f), the score of zero may be assigned to the incomplete part of the response.

B22.11 Proposals will be evaluated considering the information in the Proposal Submission and any interviews held in accordance with B20.

B23. AWARD OF CONTRACT

B23.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.

- B23.2 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.
- B23.2.1 Without limiting the generality of B23.2, 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.
- B23.3 The Work of this Contract is contingent upon Council approval of sufficient funding in the 2019 Operating Budget. If the Operational Budget approved by Council does not include sufficient funding for the Work, the City will have no obligation to award a Contract.
- B23.4 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.
- B23.5 The City may, at its discretion, award the Contract in phases.
- B23.6 Notwithstanding Paragraph 6 of Form A: Proposal and C4, the City will issue a award letter to the successful Proponent in lieu of execution of a Contract.
- B23.6.1 The Contract documents as defined in C1.1(o)(ii) in their entirety shall be deemed to be necessarily attached to or accompany said award letter. incorporated in and to form a part of the award letter notwithstanding that they are not
- B23.7 The form of Contract with the City of Winnipeg will be based on the Contract as defined in C1.1(o).
- B23.8 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.
- B23.9 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 2017-03-24) 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:

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.

D3. BACKGROUND

D3.1 The Streets Maintenance Preservation Program is part of the annual Streets Maintenance Operations Budget. Concrete repair treatments generally include partial and full depth repairs followed by diamond grinding. Asphalt 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 treatments (reference Appendix C) in accordance with the following:

- (a) North Bound Brookside Blvd from Inkster Blvd to Mollard Rd;
- (b) South Bound Kenaston Blvd from Taylor Av to Sterling Lyon Pkwy;
- (c) North Bound Kenaston Blvd from Sterling Lyon Pkwy to Taylor Av;
- (d) West Bound Bishop Grandin Blvd from Pembina Hwy On-ramp to RTC Overpass;
- (e) South Bound Dakota St from Abbotsford Cr to South limit of College Jeanne-Suave;
- (f) North Bound Dakota St from Southglen Blvd to Hyatt Pl;
- (g) South Bound Moray St from Ness Av to Portage Av;
- (h) East Bound Bishop Grandin Blvd from St. Annes Rd to De La Seigneurie Blvd

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 (Bid Opportunity) 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.
- 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.
- D4.6 Project Management services for Diamond Grinding will occur at times as directed by the Project Manager in D2.
- D4.6.1 No additional payment will be considered for Consultant Services in the event where diamond grinding occurs outside regular daytime working hours.
- D4.7 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.
- D4.7.1 The detailed Traffic Management plans are subject to final approval of the Project Manager.
- D4.8 The Consultant is responsible for:
- (a) Develop technical scope of work;
 - (b) Prepare detailed cost estimates and finalize project budget.
- D4.9 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
- D4.10 The Consultant is responsible for:
- (a) Following current project management practices and utilizing the templates in Version 3.0 or in the most current version of the City of Winnipeg's Asset Management Project Management Manual throughout all aspects and stages of the contract .
 - (b) Refer to <http://www.winnipeg.ca/finance/infrastructureplanning/camp.stm#2>

D5. PROJECT PLANNING AND PRELIMINARY DESIGN

- D5.1 Preliminary Design Services associated with the Contract are described in Appendix A-5 and are to follow Version 3.0 or the most current version of the City of Winnipeg's Asset Management Project Management Manual.
- 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) Geotechnical Investigation Requirements For Publics Works Projects (September 2015)

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 right-of-way coordination system.

D6. DETAILED DESIGN AND CONTRACT PREPARATION

D6.1 Detailed Design Services associated with the Contract are described in Appendix A-6 and are to follow Version 3.0 or the most current version of the City of Winnipeg's Asset Management Project Management Manual.

D6.2 Design drawings are not required for this contract, with the exception of D4.1 (h).

D6.3 Designs to be submitted for review must:

- (a) Be sealed by a Professional Engineer, registered in the Province of Manitoba;
- (b) Include a pavement design brief for New or Reconstruction of Asphalt Pavement Shoulders;
- (c) Include the pavement cross section (where applicable)
- (d) Conform to the Manual for the Production of Construction Drawings for the City of Winnipeg, Works and Operations Division (November 1984).
- (e) Include construction staging drawings/figures (where applicable in consultation with the City Project Manager);
- (f) Include miscellaneous details as required to better present the scope of the work to the contractor;
- (g) Allow six weeks for circulation to Underground Structures (i) Ensure that separate copies are sent to affected utilities, with specific requests made for estimates, where required.
- (h) Preliminary Construction Contract Costs (Class 1 Estimate) including utility costs, Consulting Fees, internal project costs and overheads, and any associated costs identified in the additional comments of a project.

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 and are to follow Version 3.0 or the most current version of the City of Winnipeg's Project Management Manual.

D7.2 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 and utilizing templates as described in the City of Winnipeg's Asset Management Project Management Manual Version 3.0 drafted February 2, 2015;

D7.3 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 Template, including the date, location & attendees. Issues, updates and amendments must be itemized and dated;
 - (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) Gathering IRI data prior to and after diamond grinding work
- (m) Present data in Final Report

D8. POST-CONSTRUCTION

- D8.1 Post-Construction Services associated with the Contract are described in Appendix A-8 and are to follow Version 3.0 or the most current version of the City of Winnipeg's Asset Management Project Management Manual.
- D8.2 Record Drawings are required for this contract.
- D8.3 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;
 - ◆ For each Project Location the amount of concrete repairs by percentage of surface
 - ◆ Issues encountered and resolutions achieved;
 - ◆ Any outstanding services or issue-resolutions required;
 - ◆ Final or projected final contract cost;
 - ◆ Daily field reports (as an appendix);
 - ◆ Field test reports (as an appendix);and
 - ◆ IRI data following completion of work.
 - (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) **“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.
 - (b) **“Asphalt Mill and Fill”** means to mechanically Remove an existing specified surface depth of Asphalt pavement and Replace the surface with means of an Asphalt Overlay.
 - (c) **“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.

- (d) “**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.
- (e) “**Estimated Scope**” means the scope of Services upon which the Project Estimate was based.
- (f) “**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).
- (g) “**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.
- (h) “**Pavement Preservation**” means surface works on concrete or asphalt roadways that assist the pavement structure in meeting or prolonging its use full life.
- (i) “**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.
- (j) “**Project Location**” means an individual Right-of-Way location (typically Street, Alley, Sidewalk, Intersection, or Path) identified to make up a whole Project.
- (k) “**Regional Street**” means those streets listed in Schedule E of the most recent City of Winnipeg Streets By-law No. 1481/77.

SUBMISSIONS

D10. AUTHORITY TO CARRY ON BUSINESS

- D10.1 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.

D11. INSURANCE

- D11.1 The Consultant shall procure and maintain, at its own expense and cost, insurance policies with limits no less than those shown below.

- D11.2 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 \$ 5,000,000.00 in the aggregate.

- D11.2.1 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.
- D11.3 The policies required in D11.2(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.
- D11.4 The Consultant shall require each of its Subconsultants to provide comparable insurance to that set forth under D11.2(a) and D11.2(c).
- D11.5 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 D11.8.
- D11.6 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.
- D11.7 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.
- D11.8 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

D12. COMMENCEMENT

- D12.1 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.
- D12.2 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 D10;
 - (ii) evidence of the insurance specified in D11;
 - (b) the Consultant has attended a meeting with the Project Manager, or the Project Manager has waived the requirement for a meeting.
- D12.3 The City intends to award this Contract by February 21, 2020.

D13. CRITICAL STAGES

- D13.1 The Consultant shall achieve critical stages of the Services for both Contract(s) as per D4.5 and in accordance with the following requirements:

- (a) Substantial Performance of the Construction Contract by September 18, 2020;
- (b) Total Performance of the Construction Contract by September 25, 2020;

D14. MEASUREMENT AND PAYMENT

D14.1 Further to C11, the Consultant shall submit monthly invoices to the Project Manager.

D14.2 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.

D14.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D14.4 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 10% 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 ²
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 m² shall be measured as 0.03 m².

E4. DIAMOND GRINDING SPECIFICATION

E4.1 DESCRIPTION

E4.1.1 This specification covers the Diamond Grinding of existing concrete pavements.

E4.2 EQUIPMENT

E4.2.1 Grinding Machine

- (a) The grinding machine shall be self-propelled complete with a mounted grinding head with diamond blades capable of grinding a minimum width of 1.2 meters designed for grinding and texturing pavement. The machine shall have a minimum total weight of 15,876 kilograms (including the grinding head) and an effective wheel base of no less than 3.65 meters.
- (b) The grinding machine shall have a positive means of vacuuming the grinding slurry residue from the pavement surface, leaving the pavement surface in a clean, near-dry condition.
- (c) All equipment shall be maintained to ensure it is in proper working order. The "roundness" of the match and depth control wheels of the grinding machine shall be regularly monitored; any wheels found to be out of round shall be immediately replaced.
- (d) Any equipment that causes ravelling, aggregate fractures or disturbance to the pavement joints shall not be permitted.

E4.2.2 Inertial Profiler

- (a) The Inertial Profiler shall conform to the Class 1 requirements in accordance with the latest revision of ASTM E-950.
- (b) The Inertial Profiler must be properly calibrated and certified for use for the current construction season. Acceptable certification shall be Mn/DOT or as approved by the Project Manager.
- (c) Documentation of the certification must be provided to Project Manager prior to commencement of any measurements.

E4.3 CONSTRUCTION METHODS

E4.3.1 Pavement Grinding

- (a) The pavement grinding shall be scheduled and completed on the mainline pavement lanes in a manner that produces a neat, uniform finished surface.
- (b) The pavement grinding shall not commence on until the Partial and Full-Depth Repairs have been completed.
- (c) The pavement shall be ground in the longitudinal direction parallel to the pavement center line.
- (d) The pavement grinding shall commence on the low side of the pavement.
- (e) Passes of the grinding head shall not overlap more than 25mm.
- (f) For pavements with existing curbs, grinding shall be completed to within 150mm of the face of curb.
- (g) Grinding shall be completed in a manner that removes joint or crack faults and maintains lateral drainage and constant cross slope. The maximum allowable difference between the adjacent sides of the joints and cracks shall be 2mm.
- (h) The maximum average grinding depth shall not exceed 20mm.
- (i) The Contractor shall be responsible for arranging and supplying all water required for the project. Water obtained for the City of Winnipeg shall be in accordance with E4.
- (j) The edges of adjacent pavement shoulders and auxiliary lanes shall be feathered along the edge of the mainline grinding as required to provide drainage. Feathering shall be required when the mainline grinding leaves a vertical lip greater than 5 mm to the adjacent pavement surface
- (k) Existing structures such as manholes, curb and gutter inlets and water valves shall be feathered to the satisfaction of the Project Manager.
- (l) When directed by the Project Manager, the grinding shall extend 5 meters into an existing asphalt surface.

E4.3.2 Final Surface Finish

- (a) The grinding process shall produce a pavement surface that is true in grade and uniform in appearance with a longitudinal line-type texture. The line-type texture shall contain grooves that are parallel to the centerline and present a narrow ridge corduroy type appearance. The peaks of ridges shall be a minimum 1.5 mm to a maximum 3.0 mm higher than the ground pavement surface. The finished grooves shall be evenly spaced 2 to 3 mm apart.
- (b) The grinding process shall produce a longitudinal line-type texture that is straight and free of deviations. Any deviation from a straight longitudinal line-type texture, identified at the sole discretion of the Project Manager, shall be re-ground at the expense of the Contractor.
- (c) The Contractor shall be responsible for the selection of the number and type of blades to be used to provide the proper surface finish for the aggregate type present. Unbroken fins shall be removed to the satisfaction of the Project Manager.
- (d) The Contractor shall be responsible to determine the proper sequence of operations to meet the specification. Multiple passes may be required to meet the specifications.
- (e) A minimum of 98% of the pavement surface area shall be ground or textured.
- (f) Localized depressed pavement areas will be exempt from texture and smoothness requirements. Additional grinding of these areas may be required and will be as directed by the Project Manager.

E4.3.3 Slurry Removal

- (a) The Contractor shall remove and dispose of all grinding slurry from the operations in a manner and at a location to satisfy environmental regulations.
- (b) All slurry removal operations shall be approved by the Project Manager.

- (c) No grinding slurry shall be allowed to flow across lanes occupied by traffic or enter into closed drainage systems.

E4.3.4 Slurry Handling

- (a) The grinding slurry to be removed from the site shall be collected in water-tight haul units and transported to disposal facilities as listed in E5.9 of this specification.

E4.3.5 Slurry Disposal Sites

- (a) The Contractor shall dispose of grinding slurry at the designated disposal sites provided by the City of Winnipeg. The disposal sites are as follows;
 - (i) City of Winnipeg South End Pollution Control Centre snow dump site.
 - (ii) City of Winnipeg McPhillips Street snow dump site.
- (b) The Contractor shall contact the Streets Maintenance Division Area Supervisor to obtain access. The Contractor shall ensure that these sites are only utilized for disposal of the material from this project. The sites shall be secured at all times.
- (c) Prior to grinding operations the Contractor shall be responsible for installing temporary barriers at the disposal site in order to hold back slurry from meander throughout the site. The Project Manager and the Contractor will develop a layout of the barriers. The cost of supplying and installing the barrier system will be at the expense of the Contractor.
- (d) At completion of the grinding disposal operations, the Contractor shall clean up the disposal sites to the satisfaction of the Project Manager.
- (e) The site clean-up shall include removal of excess water, removal of remaining grinding solids and regrading of the site to original condition prior to commencement of the grinding disposal operations.

E4.3.6 Smoothness Requirements

- (a) The Contractor shall be responsible for all profile testing to meet the requirements of this contract.
- (b) All testing shall be continuous and be run in the direction of the traffic. Stationing shall be provided by the Project Manager and for all testing.
- (c) The Profiler shall be operated at optimum speed as defined by the manufacturer.
- (d) Prior to performing any grinding work, the Contractor shall provide a control profilograph trace. The control trace will be used to identify the required smoothness for the project
- (e) All testing shall be reported in 100 metre segments complete with a summary of all dip and bump measurements and locations.
- (f) Upon completion of the grinding operations, acceptance measurements shall be completed.
- (g) The Contractor shall run the profile in both wheel paths of each individual lane and average the resulting IRI results to determine acceptance. The profiles shall be run 0.9 meters from each lane line. A guide shall be used to ensure proper alignment of the profile. The Project Manager will have a representative present during all testing periods.
- (h) The finished surface smoothness requirements shall be as follows;
 - (i) 70km/hr or greater Posted Speed Locations – IRI equal to or less than 1.20 m/km.
 - (ii) 50km/hr Posted Speed Locations – IRI equal to or less than 1.60 m/km.
 - (iii) Each lane will be evaluated separately in 100 metre segments.
- (i) The Contractor shall regrind, at no additional cost, any areas found not meeting the smoothness requirements.

- (j) The finished surface smoothness requirements shall not include any localized bumps exceeding 10 mm in 7.5 meters where the areas have reached the maximum removal depth. These areas shall be reviewed and approved by the Project Manager.
- (k) Areas of depressed pavement due to subsidence or other localized causes where the areas have reached the maximum removal depth will also be excluded from the finished surface smoothness requirements. These areas shall be reviewed and approved by the Project Manager.
- (l) The Contractor shall provide a print out of all smoothness measurements, a profilogram and a copy of the raw profile data in an unfiltered ERD file format.

E4.4 MEASUREMENT AND PAYMENT

- E4.4.1 Diamond Grinding will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Diamond Grinding". The area to be paid for will be the total number of square metres of pavement surface ground, textured and grinding slurry hauled and disposed of off-site in accordance with this specification, accepted and measured by the Project Manager.
- E4.4.2 Diamond Grinding with slurry deposited on the pavement side slopes will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Diamond Grinding with Slurry Deposited on the Pavement Side Slopes". The area to be paid for will be the total number of square metres of pavement surface ground, textured and grinding slurry deposited on the pavement side slopes in accordance with this specification, accepted and measured by the Project Manager.
- E4.4.3 Pavement edges of adjacent pavement shoulders and auxiliary lanes identified by the Project Manager to be feathered will be measured and included in payment at one metre width regardless of actual grinding width required to feather the lip. The minimum length of feather pass will be 30 metres.
- E4.4.4 No additional measurement or payment will be made if multiple passes of the grinding equipment are required to meet the smoothness requirements. The area of the pavement ground will only be considered for payment once unless regrinding is directed by the Project Manager.
- E4.5 No additional measurement or payment will be for testing to net the smoothness requirements of this contract.

E5. **GEOTECHNICAL INVESTIGATION REQUIREMENTS FOR PUBLICS WORKS PROJECTS (SEPTEMBER 2015)**

- E5.1.1 Fieldwork
 - (a) Clear all underground services at each test-hole location;
 - (b) On most projects, test-holes are required every 50 metres with a minimum of three (3) test holes per Project Location. For street projects greater than 500 metres, test holes may be taken every 100 m. More or fewer test-holes may be required depending upon known Site conditions – confirm with the Project Manager;
 - (c) Record location of test-hole (offset from curb, distance from cross street and house number);
 - (d) Drill 150 mm-diameter cores in pavement;
 - (e) Drill 125 mm-diameter test-holes into fill materials and subgrade;
 - (f) If a service trench backfilled with granular materials is encountered, another hole shall be drilled to define the existing sub-surface conditions;
 - (g) Test-holes shall be drilled to a 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; and
- (o) Return core sample from the pavement and soil samples to the laboratory.

E5.1.2 Lab work

- (a) Test all soil samples for moisture content;
- (b) Photograph core samples recovered from the pavement surface;
- (c) Conduct tests for plasticity index and hydrometer analysis on selected soil samples which are between 0.5 m and 1 m below top of pavement (this is the sub-grade on which the pavement and sub-base will be built). The selection will be based upon visual classification and moisture content test results, with a minimum of one sample of each soil type per street to be tested;
- (d) Prepare test-hole logs and classify subgrade (based on hydrometer) as follows:
 - < 30% silt - classify as clay
 - 30% - 50% silt - classify as silty clay
 - 50% - 70% silt - classify as clayey sil
 - >70% silt - classify as silt
- (e) For Pavement Rehabilitations and Mill and Fill Pavement Rehabilitation Method pavement cores may be required. Contact the City's Project Manager to confirm requirements;
- (f) For any uncertain situations and/or locations, or clarification of these requirements, contact the Project Manager.

E6. CROSS STITCHING SPECIFICATION

E6.1 DESCRIPTION

- (a) Cross stitching is a preservation method designed to strengthen nonworking longitudinal joints and cracks that are in relatively good condition. The construction process consists of grouting tie-bars into holes drilled across the joint or crack at angles of 35° to 45° to the pavement surface. This process is effective at preventing vertical and horizontal movement or widening of the crack or joint, thereby keeping the crack or joint tight, maintaining good load transfer, and slowing the rate of deterioration.

E6.2 PURPOSE OF TREATMENT

- (a) Cross stitching is applicable for strengthening longitudinal cracks in slabs to prevent slab migration and to maintain aggregate interlock.
- (b) Mitigating the issue of tie-bars being omitted from longitudinal contraction joints (due to construction error).
- (c) Tying roadway lanes or shoulders that are separating and causing a maintenance problem. (Cross stitching should not be used, however, to tie any new traffic lanes that are added to an existing roadway.)

- (d) Tying centerline longitudinal joints that are starting to fault.

E6.3 SELECTION CRITERIA

- (a) Pavement condition
 - (i) General Condition – Fair to Good
 - (ii) Fair to Good Ride

E6.4 CONSTRUCTION METHOD SUMMARY

E6.4.1 Cross Stitching

- (a) Drill holes at an angle (35-45 degree angle) to the pavement so that they intersect the joint or crack at mid-depth in the concrete slab. It is important to start drilling the hole at a consistent distance from the joint or crack to consistently cross the joint or crack at mid-depth. Select a drill that minimizes damage to the concrete surface and select a drill no more than 9.5mm (0.375") larger than the tie-bar diameter.
- (b) Tie-bar Diameter shall be 19mm (0.75") when used in pavement thicknesses ranging from 200mm to 300mm.
- (c) Tie-bar spacing shall be spaced at intervals ranging between 500-750mm (20-30"), 750mm spacing recommended for light traffic.
- (d) Length of tie-bar shall be 240mm (9.5") in length when used in 200mm thick concrete pavements and 275mm (11") in length when used in 230mm concrete pavements.
- (e) Drilled holes shall be alternated on either side of the joint or crack when drilling.
- (f) Holes shall be drilled to a minimum of 25mm (1") from bottom of concrete pavement. Holes shall not be drilled through the bottom of the concrete pavement structure.
- (g) Blow air into the holes to remove dust and debris after drilling.
- (h) Pour epoxy into the hole, leaving some volume for the bar to occupy the hole.
- (i) Insert the tie-bar, remove excess epoxy, and finish flush with the pavement surface. The pavement may be reopened to traffic as soon as the epoxy has fully set.

E6.5 EQUIPMENT

E6.5.1 Hydraulic Powered Drill Mounted on stand (recommended)

E6.5.2 Oil Free Jetted Air Compressor shall be used to blow out drilled tie-bar holes, vacuum will not be acceptable.

E6.6 MEASUREMENT AND PAYMENT

E6.6.1 Cross Stitching will be measured on a Linear Meter basis and paid for at the Contract Unit Price per linear meter for "Cross Stitching". The area to be paid for will be the total number of Linear Meters of pavement cross stitched, tie-bars and epoxy shall be inclusive to "Cross Stitching" payment in accordance with this specification, accepted and measured by the Project Manager.

APPENDIX A – DEFINITION OF PROFESSIONAL CONSULTING SERVICES

DEFINITION OF PROFESSIONAL CONSULTANT SERVICES – ENGINEERING

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DEFINITION OF PROFESSIONAL CONSULTANT SERVICES – ENGINEERING

1.0 DEFINITIONS

- 1.1. “Consulting Engineer” means the Professional Engineer or Professional Engineering firm engaged by the City to perform Consulting Engineering Services as described herein and within the Scope of Services of a Contract. The “Consulting Engineer” will hold and maintain, for the duration of the Project, a Certificate of Authorization from the Association of Professional Engineers and Geoscientists of Manitoba in the “Practicing Entity” category.
- 1.2. “Professional Engineer” means an individual engineer registered to practice in the Province of Manitoba by the Association of Professional Engineers and Geoscientists of Manitoba (APEGM), as required by the Engineering and Geoscientific Professions Act of the Province of Manitoba and the by-laws of the Association of Professional Engineers and Geoscientists of the Province of Manitoba.
- 1.3. “Professional Engineering” means the practice of professional engineering in the Province of Manitoba, as governed by the Engineering and Geoscientific Professions Act of the Province of Manitoba and the by-laws of the Association of Professional Engineers and Geoscientists of the Province of Manitoba (APEGM).
- 1.4. “Seal” means the impression of the stamp issued by APEGM to registered Professional Engineers, plus the signature of the registered Professional Engineer, plus the date the signature was applied.

2.0 INTRODUCTION

- 2.1. Further to the General Conditions for Consultant Services, it is the intent of this Appendix to clarify the City’s specific requirements of the consulting services of Professional Engineers; to more fully identify the services to be rendered by Consulting Engineers to the City and to other parties on behalf of the City; and to provide a more clearly determined basis of obligation in respect thereof by Consulting Engineers to the City and to third parties in the provision of such services.

3.0 GENERAL REQUIREMENTS OF PROFESSIONAL ENGINEERS

- 3.1. All services described herein shall be performed in the City of Winnipeg, unless otherwise authorized in writing by the Project Manager, and under the direct supervision of a Professional Engineer registered in the Province of Manitoba.
- 3.2. All drawings, reports, recommendations and other documents originating therefrom involving the practice of Professional Engineering shall bear the Seal of a Professional Engineer.
- 3.3. Reports and documents not involving the practice of Professional Engineering, such as letters of information, minutes of meetings, construction progress reports, may be originated and signed by other responsible personnel engaged by the Consulting Engineer and accepted by the Project Manager. Progress estimates, completion certificates and other reports related to the technical aspects of a Project, must be endorsed by the Consulting Engineer in a manner acceptable to the Project Manager.
- 3.4. None of the services, tasks, actions or requirements described herein, nor any verbal instruction from the Project Manager, are intended to relieve the construction contractor of his contractual and/or other legal obligations in respect thereof, unless specifically indicated, in writing, by the Project Manager.

4.0 PROFESSIONAL ENGINEERING SERVICES – ADVISORY SERVICES

- 4.1. Advisory services have been referred to by the City of Winnipeg as “Type 1 Services”
- 4.2. Advisory services are normally not associated with or followed by preliminary design and/or design services.
- 4.3. Advisory services include, but are not limited to:
 - a) Expert Testimony;
 - b) Appraisals;
 - c) Valuations;
 - d) Rate structure and tariff studies;
 - e) Management services other than construction management;
 - f) Feasibility studies;
 - g) Planning studies;
 - h) Surveying and mapping;
 - i) Geotechnical investigations;
 - j) Hydrological investigations;
 - k) Safety audits;
 - l) Value engineering audits;
 - m) Inspection, testing, research, studies, or reports concerning the collection, analysis, evaluation; and
 - n) Interpretation of data and information leading to conclusions and recommendations based upon specialized engineering experience and knowledge.

5.0 PROFESSIONAL ENGINEERING SERVICES – PRELIMINARY DESIGN

- 5.1. Preliminary Design services have been referred to by the City of Winnipeg as “Type 2 Services”
- 5.2. Engineering services for preliminary design normally precede the detailed design of a Project.
- 5.3. Preliminary design services include, but are not limited to:
 - a) Preliminary engineering studies;
 - b) Engineering investigations;
 - c) Surface and subsurface site explorations, measurements, investigations, and surveys;
 - d) Operational studies including drainage studies, traffic studies, and noise attenuation;
 - e) Functional planning;
 - f) Formal and/or informal consultations with stakeholders and/or the general public
 - g) Physical, economical (capital and operating) and environmental studies including evaluation, comparison, and recommendation regarding alternative preliminary designs;

- h) Special applications to public agencies for necessary authorizations, preparation and submission of reports and drawings thereto and appearance before same in support of the application;
- i) Identification of the necessary authorizations from regulatory authorities and/or public agencies and determination of any related impacts and/or risks to the Project;
- j) Coordination with all the utilities including (but not limited to) hydro, telephone, gas, telecoms, fibre optics, traffic signals and other City or developer works with respect to location, relocation, construction and/or reconstruction;
- k) Preparation and submission of a report and appropriate drawings to the Project Manager, fully documenting data gathered, explaining adequately the assessment made, stating with clarity the resulting conclusions, and containing all recommendations which are relevant to this stage of Project implementation.

6.0 PROFESSIONAL ENGINEERING SERVICES – DETAILED DESIGN

- 6.1. Detailed Design services have been referred to by the City of Winnipeg as “Type 3 Services”
- 6.2. Engineering services for detailed design normally involve preparation of detailed designs, construction contract specifications and drawings, analysis of bids and recommendations regarding construction contract award.
- 6.3. Detailed design services include, but are not limited to:
 - a) Addressing alternative methods of accommodating; relocating; avoiding, and/or protecting utilities and railways; proposing alternative methods of solution, reviewing same with the appropriate regulatory approval agencies and stakeholders;
 - b) Application to public agencies for necessary authorizations, preparation and submission of reports and drawings thereto, and appearance before same in support of the application;
 - c) Formal and/or informal consultations with stakeholders and/or the general public;
 - d) Preparation and submission of detailed engineering calculations, drawings, and criteria employed in the design(s), securing review of and acceptance by the Project Manager;
 - e) Submission of engineering drawings and plans for circulation through the Underground Structures process;
 - f) Preparation of detailed engineering drawings, specifications and bid opportunity documents consistent with the standards and guidelines of the City, securing review of and acceptance by the Project Manager;
 - g) Preparation and provision to the Project Manager in written form, a fully detailed formal construction contract estimate;
 - h) Provision of appropriate response to bidders and advice to the Project Manager during the bid opportunity advertising period and, subject to acceptance by the Project Manager, issuing addenda to the bid opportunity documents;
 - i) Submission of a review, analysis, comparison, tabulation, calculation, and evaluation of the bids received, to the Project Manager, including a recommendation for construction contract award;
 - j) Arranging and attending a pre-award meeting with the recommended construction contractor, the Consulting Engineer and the Project Manager;
 - k) Preparation of a report including revised contract estimate, identifying and explaining variations from the earlier formal estimate.

7.0 PROFESSIONAL ENGINEERING SERVICES – CONTRACT ADMINISTRATION

- 7.1. Contract Administration services have been referred to by the City of Winnipeg as “Type 4 Services”
- 7.2. Engineering services for Contract Administration are associated with the construction of a Project and include the office and field services required to ensure the execution of the Project in accordance with the intent of the City and in conformance with the particulars of the drawings and specifications.
- 7.3. Engineering services for Contract Administration can be generally divided into NON-RESIDENT and RESIDENT services.
- 7.4. NON-RESIDENT Contract Administration services include but are not limited to:
 - a) Consultation with and advice to the Project Manager during the course of construction;
 - b) Review and acceptance of shop drawings and other submissions supplied by the construction contractor or supplier to ensure conformance with the drawings and specifications;
 - c) Review and report to the Project Manager upon laboratory, shop and other tests conducted upon materials and/or equipment placed or installed by the construction contractor to ensure conformance with the drawings and specifications;
 - d) Acceptance of and/or recommendations for alternate materials and methods, subject to the approval of the Project Manager;
 - e) Provision to the Project Manager of a complete, current monthly Project status report;
 - f) Provision to the Project Manager a current update of revised construction contract-end cost estimate on a monthly basis, or more frequently if necessary, with explanation and justification of any significant variation from the preceding construction contract-end cost projection;
 - g) Definition and justification of any changes to the construction contract for review by the Project Manager;
 - h) Supplying the Project Manager with a copy of all significant correspondence relating directly or indirectly to the Project, originating from or distributed to, parties external to the Consulting Engineer, immediately following receipt or dispatch;
 - i) Provision of adequate and timely direction of field personnel by senior officers of the Consulting Engineer;
 - j) Establishment prior to construction and submission to the Project Manager of written and photographic records of, and assessment of the physical condition of the project site and the properties, buildings, facilities, and structures adjacent to the project site sufficient to equip the Consulting Engineer to provide valid evidence and relevant testimony in settlement of any claim involving the City by any court of law, or by any other party for damages thereto arising from the Project;
 - k) Arranging and attending pre-construction meetings and on-site or off-site review meetings, including representatives of the construction contractor, the Project Manager, and other technical stakeholders as applicable;
 - l) The preparation and submission of:
 - i) a detailed design notes package including items such as structural, geotechnical, hydraulic and heating, air-conditioning and ventilation design calculations; mechanical and electrical design calculations related to process equipment and building services; process design calculations; and instrumentation and process control design calculations;

- ii) approved related shop drawings and equipment process manuals all within one (1) month of completion of each separate installation construction contract required to complete the works.

7.5. RESIDENT Contract Administration services include but are not limited to:

- a) Provision of qualified resident personnel – acceptable to the Project Manager – present at the Project site to carry out the services as specified below:
 - i) inspection of all pipe prior to installation;
 - ii) inspection and acceptance of excavation for, and full time inspection at the time of bedding placement, pipe laying and backfilling in respect of installation of watermains, land drainage sewers, and wastewater sewers;
 - iii) inspection of installation of all connections to watermains, sewers, manholes, valves, hydrants or house services, and excavation and/or exposing of all underground services, structures, or facilities;
 - iv) inspection of all excavations to determine soil adequacy prior to installation of base and subbase courses for sidewalks, public back lanes, and street pavements;
- b) Further to 7.5a), full time inspection will require assignment of qualified resident personnel – acceptable to the Project Manager – to each specific location when the referenced work is being undertaken by the construction contractor:
 - i) full time inspection and/or testing of watermains and sewers;
 - ii) full-time inspection during pavement placement; during finishing of public sidewalks and public lanes and/or street pavements
 - iii) full-time inspection during construction of bridge infrastructure and other structural works.
- c) Conduct detailed inspection of construction sufficient to ensure that the construction carried out by the construction contractor conforms to the drawings and specifications;
- d) Co-ordination and staging of all other works on the Project site including traffic signal installations, hydro, telephone, and gas utility work, railway work forces and/or other City or developer work;
- e) With approval of the Project Manager, provision of notice to adjacent residents and businesses of those stages of construction of the Project that will interrupt public services or access thereto, sufficiently in advance of same to permit preparation therefore;
- f) Enforcement of construction contractor conformance with the City of Winnipeg Manual of Temporary Traffic Control in Work Areas on City Streets and with reasonable standards of safety for motorists and pedestrians;
- g) Provision of reference line and elevation to the construction contractor and checking upon the construction contractor's adherence thereto;
- h) Representation of the City to the local residents and businesses and other inquiries in a professional manner, with responsible and prompt reaction to requests, minimizing impact and/or disruption of the Project to the extent possible;
- i) Arranging for and carrying out of testing of materials utilized by the construction contractor to ensure conformance with the drawings and specifications;
- j) Measurement, calculation, preparation, certification, and prompt submission of progress estimates to the Project Manager for payment to the construction contractor for construction performed in accordance with the drawings and specifications;

- k) Arrange, attend and prepare and distribute records of and minutes for, regularly held on-site or offsite Project review meetings including representatives of the construction contractor and the City;
- l) Promptly report any significant and unusual circumstances to the Project Manager;
- m) Promptly arrange for and conduct a detailed final inspection of the Project with the construction contractor and the Project Manager prior to commencement of the period of contractor warranty specified in the construction contract for the Project, and providing to the Project Manager in written form an appropriate recommendation for commencement of the warranty period for the constructed or partially constructed Project;
- n) Act as Payment Certifier and administer all construction contracts as required under the Builder's Liens Act of Manitoba;
- o) Keep a continuous record of working days and days lost due to inclement weather during the course of construction contract works;

8.0 PROFESSIONAL ENGINEERING SERVICES – POST CONSTRUCTION SERVICES

- 8.1. Engineering Services in the post-construction phase of a Project are associated with the completion and close-out of the Project and generally considered part of Contract Administration (Type 4) Services.
- 8.2. The Consulting Engineer is required to provide post-construction services including but not limited to:
 - a) Preparation of a Certificate of Substantial Performance in the standard City of Winnipeg format
 - b) Preparation of a Certificate of Total Performance in the standard City of Winnipeg format
 - c) Provision of inspection services during the warranty period of the construction contract;
 - d) Provision of inspection services (as per 7.5.a)) for maintenance (paid) items within the warranty period of the construction contract;
 - e) Coordination of a detailed inspection of the Project with the construction contractor and the Project Manager prior to the end of the period of construction contract warranty specified in the construction contract for the Project;
 - f) Prompt resolution of:
 - i) deficiencies in design
 - ii) outstanding construction contract warranty issues
 - g) Submission of a final construction report within three (3) months of the Substantial Performance date of the construction contract, including final or projected final construction contract costs;
 - h) Provision of record drawings, within three (3) months of Substantial Performance date;
 - i) Preparation of a Certificate of Acceptance in the standard City of Winnipeg format.

9.0 PROFESSIONAL ENGINEERING SERVICES – ADDITIONAL SERVICES

- 9.1. Additional Services have been referred to by the City of Winnipeg as “Type 5 Services”
- 9.2. Additional services are Consulting Engineering services that fall outside those described above and may or may not be associated with a construction project, but are not in place of or in

substitution for those services elsewhere specified in the *Definition of Professional Consultant Services – Engineering*, with respect to other types or categories of Services.

9.3. Engineering Services called Additional Services include but are not limited to:

- a) Revision of completed, or substantially completed, drawings and/or specifications that were in conformance with the original intent of the City or had been accepted by the Project Manager;
- b) Preparation of operating manuals and/or training of operating personnel;
- c) Start-up and/or operation of operating plants;
- d) Procurement of materials and equipment for the City;
- e) Preparation for and appearance in litigation on behalf of the City;
- f) Preparation of environmental studies and reports and presentation thereof in public hearings;
- g) Preparation and submission to the Project Manager, final quantities and dimensional measurements which the City requires for assessment of Local Improvement Levies within one (1) month of Project completion.

APPENDIX B – REFERENCES AND ATTACHEMENTS

THE FOLLOWING DOCUMENTS ARE REFERENCED IN THIS REQUEST FOR PROPOSAL:

- [Accessibility Design Standards](#) – City of Winnipeg (May 2010); also at: [LINK](#), including a link to the City of Winnipeg’s Universal Design Policy,
- [City of Winnipeg Standard Construction Specifications](#) – most current edition as at time of Construction Bid Opportunity advertising;
- https://winnipeg.ca/infrastructure/pdfs/manuals/PMM_Main_Body_V4-0.pdf– City of Winnipeg’s Asset Management Project Management Manual Version 4.0 (June 2019);
- [Tree Planting Details and Specifications Downtown Area and Regional Streets](#) – City of Winnipeg (May 2009); also at [LINK](#)
- [Tree Removal Guidelines](#) – City of Winnipeg; also at: [LINK](#);
- *Transportation Standards Manual* – City of Winnipeg (February 1991);
- *Manual for the Production of Construction Drawings* – City of Winnipeg (November 1984).
- [Winnipeg Pedestrian and Cycling Strategies](#) Adopted by Council on July 15, 2015.

Please contact the Project Manager for access to any documents not linked, or to report any broken or inaccessible links.

APPENDIX C – PROJECT LOCATION AND TECHNICAL SCOPING

Note: The “*Additional Information*” provided within the following table relative to Project Location contain specific information or issues, known to exist on Site at the time of issuance of this Request for Proposal. This information is not meant to be exhaustive and not meant to take the place of the investigations and due diligence required of the Proponent.

The specific utility and agency coordination identified below notwithstanding, the successful Consultant will be required to investigate and coordinate any and all utility requirements of the Project if any.

Estimated Scope	Notes	Project Location	Capital Construction Estimate	Project Budget
Concrete Repairs, PDR, Some Diamond Grinding, Joint Sealing	2,3,4,7,8	N/B Brookside Blvd from Inkster Blvd to Mollard Rd	\$ 550,000.00	\$ 627,000.00
Concrete Repairs, PDR, Some Diamond Grinding, Joint Sealing	2,3,4,7,8	S/B Kenaston Blvd from Taylor Ave to Sterling Lyon Pkwy	\$ 185,000.00	\$ 210,900.00
Concrete Repairs, PDR, Some Diamond Grinding, Joint Sealing	2,3,4,7,8	N/B Kenaston Blvd from Sterling Lyon Pkwy to Taylor Ave	\$ 280,000.00	\$ 319,200.00
Concrete Repairs, PDR, Some Diamond Grinding, Joint Sealing	2,3,4,7,8	W/B Bishop Grandin Blvd from Pembina Hwy On-Ramp to New RTC Overpass	\$ 330,000.00	\$ 376,200.00
Concrete Repairs, PDR, Cross Stitching, Joint Sealing	2,3,4,6,7,8	S/B Dakota St from Abbotsford Cr to South limit of College Jeanne-Suave	\$ 260,000.00	\$ 296,400.00
Concrete Repairs, PDR, Cross Stitching, Joint Sealing	2,3,4,6,7,8	N/B Dakota St from Southglen Blvd to Hyatt Pl	\$ 220,000.00	\$ 250,800.00
Minor Curb/Splash Strip Renewal, Asphalt Mill and Fill, Crack Sealing	1,2,8	S/B Moray St from Ness Ave to Portage Avenue	\$ 310,000.00	\$ 353,400.00
Asphalt Shoulder Reconstruction/Adjacent pavement repairs as required	1,2,5,8	E/B Bishop Grandin Boulevard from St.Annes Road to De La Seigneurie Boulevard	\$ 475,000.00	\$ 541,000.00
Total Project Budget				\$ 2,974,900.00

Additional Information:

General: *Assume 70 working days to Substantial Performance for this Program*

1. Refer to E.1 for guidelines (Asphalt Overly Preservation Method)
2. Refer to E.2 for guidelines.(Concrete Pavement Preservation Method)
3. Refer to E.3 for guidelines.(Partial Depth Concrete Repair or PDR)
4. Refer to E.4 for guidelines.(Diamond Grinding Specification)
5. Refer to E.5 for guidelines (Geotechnical Testing Requirements)
6. Refer to E.6 for guidelines (Cross Stitching Guidelines)
7. Joint and Crack sealing incidental to Diamond Grinding.
8. Selection and undertaking of work at the Project Location is subjected to available funds.
9. Work to include left-turn and right- turn lanes.