



THE CITY OF WINNIPEG

TENDER

TENDER NO. 358-2024

2024 STREETS MAINTENANCE PRESERVATION PROGRAM

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 2024 Streets Maintenance Preservation Program

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, May 16, 2024.

B2.2 The Contract Administrator or the Manager of Purchasing 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 Contract Administrator identified in D5.1.

B3.2 If the Bidder finds errors, discrepancies or omissions in the Tender, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.

B3.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Tender will be provided by the Contract Administrator to all Bidders by issuing an addendum.

B3.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Tender will be provided by the Contract Administrator only to the Bidder who made the enquiry.

B3.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B3.6 Any enquiries concerning submitting through MERX should be addressed to:
MERX Customer Support
Phone: 1-800-964-6379
Email: merx@merx.com

B4. CONFIDENTIALITY

B4.1 Information provided to a Bidder by the City or acquired by a Bidder 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 Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

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

B4.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Tender to the media or any member of the public without the prior written authorization of the Contract Administrator.

B5. ADDENDA

B5.1 The Contract Administrator may, at any time prior to the Submission deadline, issue addenda correcting errors, discrepancies or omissions in the Tender, or clarifying the meaning or intent of any provision therein.

- B5.2 The Contract Administrator 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 MERX website at www.merx.com.
- B5.4 The Bidder is responsible for ensuring that they have received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.
- B5.6 Notwithstanding B3, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D5.

B6. SUBSTITUTES

- B6.1 The Work is based on the Plant, Materials and methods specified in the Tender.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;
 - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in their sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B6.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons they wish to inform.

- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base their Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B17.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B7. BID COMPONENTS

- B7.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices;
 - (c) Form G1: Bid Bond and Agreement to Bond.
- B7.2 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely.
- B7.3 The Bid shall be submitted electronically through MERX at www.merx.com.
- B7.3.1 Bids will **only** be accepted electronically through MERX.
- B7.4 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B17.1(a).

B8. BID

- B8.1 The Bidder shall complete Form A: Bid/Proposal, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid/Proposal shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in their own name, their name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than their own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid/Proposal, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in their own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by their duly authorized officer or officers;

- (d) if the Bidder is carrying on business under a name other than their 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.

B8.4.1 The name and official capacity of all individuals signing Form A: Bid/Proposal should be entered below such signatures.

B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid and the Contract, when awarded, shall be both joint and several.

B9. PRICES

B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B9.1.1 Prices stated on Form B: Prices shall not include any costs which may be incurred by the Contractor with respect to any applicable funding agreement obligations as outlined in D35. Any such costs shall be determined in accordance with D35.

B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B9.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B9.5 The Bidder shall enter the Total Bid Price from Form B: Prices into the Total Bid Price field in MERX.

B9.5.1 Bidders are advised that the calculation indicated in B17.4 will prevail over the Total Bid Price entered in MERX.

B10. DISCLOSURE

B10.1 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.

B10.2 The Persons are:

- (a) N/A

B11. CONFLICT OF INTEREST AND GOOD FAITH

B11.1 Further to C3.2, Bidders, by responding to this Tender, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.

B11.2 Conflict of Interest means any situation or circumstance where a Bidder or employee of the Bidder 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 Bids or award of the Contract; or
 - (ii) compromise, impair or be incompatible with the effective performance of a Bidder'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 their participation in the Tender process or the Work; or
- (f) has knowledge of confidential information (other than confidential information disclosed by the City in the normal course of the Tender process) of strategic and/or material relevance to the Tender process or to the Work that is not available to other bidders and that could or would be seen to give that Bidder an unfair competitive advantage.

B11.3 In connection with their Bid, each entity identified in B11.2 shall:

- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Work;
- (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the Tender process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Contract Administrator; 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.

B11.4 Without limiting B11.3, the City may, in their 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 their sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Bidder to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in their sole discretion, to avoid or mitigate the impact of such Conflict of Interest.

B11.5 Without limiting B11.3, 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 their sole discretion:

- (a) disqualify a Bidder that fails to disclose a perceived, potential or actual Conflict of Interest of the Bidder or any of their employees proposed for the Work;
- (b) require the removal or replacement of any employees proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in their sole discretion, determines cannot be avoided or mitigated;
- (c) disqualify a Bidder or employees proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B11.4 to avoid or mitigate a Conflict of Interest; and
- (d) disqualify a Bidder if the Bidder, or one of their employees proposed for the Work, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.

B11.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in their sole discretion.

B12. QUALIFICATION

B12.1 The Bidder 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; and

- (b) be financially capable of carrying out the terms of the Contract; and
 - (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B12.2 The Bidder and any proposed Subcontractor (for the portion of the Work 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, Purchasing Division website at <https://www.winnipeg.ca/matmgt/Templates/files/debar.pdf>
- B12.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:
- (a) have successfully carried out work similar in nature, scope and value to the Work; and
 - (b) be fully capable of performing the Work 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 completed the Accessible Customer Service online training required by the Accessibility for Manitobans Act (AMA) (see B12.5 and D7).
- B12.4 Further to B12.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
- (a) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) in the form of:
 - (i) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
 - (ii) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
 - (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Purchasing Division website at <http://www.winnipeg.ca/matmgt/>).
- B12.5 Further to B12.3(d), the Bidder acknowledges they and all Subcontractors have obtained training required by the Accessibility for Manitobans Act (AMA) available at [Accessibility Training](#) for anyone that may have any interaction with the public on behalf of the City of Winnipeg.
- B12.6 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.
- B12.7 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B13. BID SECURITY

- B13.1 The Bidder shall include in their Bid Submission bid security in the form of a digital bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in Form G1: Bid Bond and Agreement to Bond, available on The City of Winnipeg, Corporate Finance, Purchasing Division website at <https://www.winnipeg.ca/MatMgt/templates/files/Bidsecurity.pdf>.
- B13.2 Bid security shall be submitted in a digital format meeting the following criteria:
- (a) The version submitted by the Bidder must have valid digital signatures and seals;
 - (b) The version submitted by the Bidder must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.
 - (c) The version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.
 - (d) The verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
 - (e) The results of the verification must provide a clear, immediate and printable indication of pass or fail regarding B13.2(a).
- B13.3 Bonds failing the verification process will not be considered to be valid and the bid shall be determined to be non-responsive in accordance with B17.1(a).
- B13.4 Bonds passing the verification process will be treated as original and authentic.
- B13.4.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.
- B13.5 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly formed with the successful Bidder and the contract securities are furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B13.6 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Tender.

B14. OPENING OF BIDS AND RELEASE OF INFORMATION

- B14.1 Bids will not be opened publicly.
- B14.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the MERX website at www.merx.com.
- B14.3 After award of Contract, the name(s) of the successful Bidder(s) and their Contract amount(s) will be available on the MERX website at www.merx.com.
- B14.4 The Bidder is advised that any information contained in any Bid 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).
- B14.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder 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.

B15. IRREVOCABLE BID

- B15.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid/Proposal.
- B15.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly formed and the contract securities have been furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid/Proposal.

B16. WITHDRAWAL OF BIDS

- B16.1 A Bidder may withdraw their Bid without penalty prior to the Submission Deadline.

B17. EVALUATION OF BIDS

- B17.1 Award of the Contract shall be based on the following bid evaluation criteria:
- (a) compliance by the Bidder with the requirements of the Tender, or acceptable deviation therefrom (pass/fail);
 - (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B12 (pass/fail);
 - (c) Total Bid Price;
 - (d) economic analysis of any approved alternative pursuant to B6.
- B17.2 Further to B17.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.
- B17.3 Further to B17.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in their Bid or in other information required to be submitted, that they are qualified.
- B17.4 Further to B17.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices adjusted, if necessary, as follows:
- (a) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder is within the budgetary provision for the Work, no adjustment will be made to the Total Bid Price; or
 - (b) if the lowest evaluated responsive Bid submitted by a responsible and qualified Bidder exceeds the budgetary provisions of the Work, the Total Bid Prices of all responsive Bids submitted by responsible and qualified Bidders will be adjusted by progressively removing project locations in the order listed below until the Total Bid Price and Total Prices of Part 1 and Part 2 are within the budgetary provision.
 - (i) Part 1 and Part 2 have separate budgetary provisions and will be evaluated as per B17.4(b) until the Total Prices of Part 1 and Part 2 are within their respective budgetary provisions. Project Locations will be removed in the order below as follows:
 - Part 1
 - (i) Logan Avenue – Blake Street to Rail Crossing (Weston)
 - (ii) Meridian Drive – Discovery Place to Inksbrook Drive
 - (iii) Haggart Avenue – Meridian Drive to #195 Haggart Avenue
 - (iv) Mazonod Road – Debaets Street to Camiel Sys Street
 - Part 2
 - (i) Lagimodiere Boulevard Southbound Shoulder Reconstruction – Warman Road to Dugald Road

B17.4.1 Further to B17.1(a), in the event that a unit price is not provided on Form B: Prices, the City may determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.

B17.4.2 Bidders are advised that the calculation indicated in B17.4 will prevail over the Total Bid Price entered in MERX.

B18. AWARD OF CONTRACT

B18.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B18.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be qualified, and the Bids are determined to be responsive.

B18.2.1 Without limiting the generality of B18.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with their own forces;
- (d) only one Bid 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.

B18.3 If funding for the Work is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, Bidders are advised that the terms of D35 shall immediately take effect upon confirmation of such funding, regardless of when funding is confirmed.

B18.4 Where an award of Contract is made by the City, the award shall be made to the qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B17.

B18.4.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of their Bid upon written request to the Contract Administrator.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2020-01-31) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Purchasing Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm
- C0.2 A reference in the Tender to a section, clause or subclause with the prefix “C” designates a section, clause or subclause in the *General Conditions for Construction*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

D1.1 In addition to the General Conditions for Construction, these Supplemental Conditions are applicable to the Work of the Contract.

D2. FORM OF CONTRACT DOCUMENTS

D2.1 Notwithstanding C4.1(c) and C4.4, the Contract Documents will be provided to the Contractor electronically and there will be no requirement for execution and return to the City by the Contractor. Accordingly, the provisions under C4.4(a) and C4.4(b) are no longer applicable.

D3. SCOPE OF WORK

D3.1 The Work to be done under the Contract shall consist of:

- (a) Concrete Pavement Preservation
 - (i) Eastbound Sterling Lyon Parkway – Kenaston Boulevard to Victor Lewis Drive
 - (ii) Logan Avenue – Blake Street to Railway Crossing Limits (Weston Street)
 - (iii) Sage Creek – Lagimodiere Boulevard to Warde Avenue
 - (iv) Camiel Sys Street – 310m East of Mazonod Road to Plessis Road
 - (v) Mazonod Road – Debaets Street to Camiel Sys Street
 - (vi) Haggart Avenue – Meridian Drive to #195 Haggart Avenue
 - (vii) Meridian Drive – Discovery Place to Inksbrook Drive
- (b) Diamond Grinding
 - (i) Eastbound Sterling Lyon Parkway – Kenaston Boulevard to Victor Lewis Drive
 - (ii) Logan – Blake Street to Railway Crossing Limits (Weston Street)
- (c) Thick Asphalt Overlay
 - (i) Camiel Sys Street – Mazonod Road to 310m East
- (d) Asphalt Mill and Fill
 - (i) Westbound Bison Drive – 75m West of Pembina Highway to Markham Road
 - (ii) Northbound Lagimodiere Boulevard – 145m North of Sage Creek Boulevard to Bishop Grandin Boulevard
 - (iii) Northbound Lagimodiere Drive – Bishop Grandin Boulevard to Fermor Avenue
- (e) Asphalt Paving of Granular Shoulder Reconstruction
 - (i) Westbound Bison Drive – 75m West of Pembina Highway to Markham Road
 - (ii) Southbound Lagimodiere Boulevard – Warman Road to Dugald Road

D3.2 The major components of the Work are as follows:

- (a) Concrete Pavement Preservation and Diamond Grinding
 - (i) Renewal of existing concrete joints through partial and full depth repairs
 - (ii) Renewal of existing sidewalks, curbs, splash strips and median slabs as required
 - (iii) Adjustment of existing catch basins, manholes and appurtenances as required
 - (iv) Diamond grinding
 - (v) Joint sealing at all joints within diamond grinding areas (incidental to Diamond Grinding)
 - (vi) Crack routing and sealing as required
 - (vii) Joint sealing all full depth repairs (incidental to Partial Slab Patch Repairs)

- (viii) Boulevard restoration as required
 - (b) Thick Asphalt Overlay
 - (i) Renewal of existing concrete joints through full depth concrete repairs
 - (ii) Pavement milling at Construction limit tie ins
 - (iii) Adjustment of existing catch basins, manholes and appurtenances as required
 - (iv) Renewal of existing sidewalk, curbs, splash strips and median slabs as required
 - (v) Placement of thick asphalt overlay (average thickness 80mm)
 - (vi) Reflective crack maintenance
 - (vii) Boulevard restoration as required
 - (c) Asphalt Mill and Fill
 - (i) Asphalt pavement milling (average thickness 50mm)
 - (ii) Renewal of existing concrete joints through full depth concrete repairs
 - (iii) Partial depth asphalt patching of existing concrete joints
 - (iv) Renewal of existing sidewalk, curbs, splash strips and median slabs as required
 - (v) Placement of asphalt overlay (average thickness 60mm)
 - (vi) Reflective crack maintenance
 - (vii) Boulevard restoration as required
 - (d) Asphalt Paving of Granular Shoulder Reconstruction
 - (i) Excavation
 - (ii) Placement of base course and subbase
 - (iii) Renewal of existing curb as required
 - (iv) Minor pavement repairs adjacent to roadway shoulder as required
 - (v) Placement of asphalt pavement
 - (vi) Boulevard restoration
- D3.3 Shoulders and turn lanes will not be included in the work on Lagimodiere Boulevard Northbound.
- D3.4 Turn lanes will not be included in the work on Bison Drive Westbound.
- D3.5 Diamond Grinding on Sterling Lyon Parkway will not include turn lanes. Feathering will be required along the edges of the ground surface.
- D3.6 The funds available for this contract are \$2,458,575.00

D4. SITE INVESTIGATION DUE DILIGENCE AND RISK

- D4.1 Notwithstanding C3.1, the Contractor acknowledges that the site investigation reports and other site information included in this Tender have been provided to it and may be relied upon by the Contractor to the extent that the Contractor uses Good Industry Practice in interpreting such report(s) and site information and carries out the Work in accordance with Good Industry Practice based upon such report(s) and the information contained in them and such other site information. In the event that a site condition related to:
- (a) the location of any utility which can be determined from the records or other information available at the offices of any public authority or person, including a municipal corporation and any board or commission thereof, having jurisdiction or control over the utility;
 - (b) the Site conditions, including but not limited to subsurface hazardous materials or other concealed physical conditions;
 - (c) the location, nature, quality or quantity of the materials to be removed or to be employed in the performance of the Work;
 - (d) the nature, quality or quantity of the Plant needed to perform the Work;

(e) all matters concerning access to the Site, power supplies, location of existing services, utilities or materials necessary for the completion of the Work; and

(f) all other matters which could in any way affect the performance of the Work;

that could not have been “properly inferable”, “readily apparent” and readily discoverable” using Good Industry Practice by the Contractor, results in additional Work which is a direct result of this newly discovered site condition, such additional Work will be considered by the City under Changes in Work.

D5. CONTRACT ADMINISTRATOR

D5.1 The Contract Administrator is Stantec Consulting, represented by:

Dylan Mourant
Transportation Project Manager
Telephone No. 204 894-0592
Email Address dylan.mourant@stantec.com

D5.2 At the pre-construction meeting, Dylan Mourant will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D6. CONTRACTOR'S SUPERVISOR

D6.1 At the pre-construction meeting, the Contractor shall identify their designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D6.2 At least two (2) Business Days prior to the commencement of any Work on the site, the Contractor shall provide the Contract Administrator with a phone number where the supervisor identified in D6.1 or an alternate can be contacted twenty-four (24) hours a day to respond to an emergency.

D7. ACCESSIBLE CUSTOMER SERVICE REQUIREMENTS

D7.1 The Accessibility for Manitobans Act (AMA) imposes obligations on The City of Winnipeg to provide accessible customer service to all persons in accordance with the Customer Service Standard Regulation (“CSSR”) to ensure inclusive access and participation for all people who live, work or visit Winnipeg regardless of their abilities.

D7.1.1 The Contractor agrees to comply with the accessible customer service obligations under the CSSR and further agrees that when providing the Goods or Services or otherwise acting on the City of Winnipeg’s behalf, shall comply with all obligations under the AMA applicable to public sector bodies.

D7.1.2 The accessible customer service obligations include, but are not limited to:

- (a) providing barrier-free access to goods and services;
- (b) providing reasonable accommodations;
- (c) reasonably accommodating assistive devices, support persons, and support animals;
- (d) providing accessibility features e.g. ramps, wide aisles, accessible washrooms, power doors and elevators;
- (e) inform the public when accessibility features are not available;
- (f) providing a mechanism or process for receiving and responding to public feedback on the accessibility of all goods and services; and
- (g) providing adequate training of staff and documentation of same.

D8. UNFAIR LABOUR PRACTICES

- D8.1 Further to C3.2, the Contractor declares that in bidding for the Work and in entering into this Contract, the Contractor and any proposed Subcontractor(s) conduct their respective business in accordance with established international codes embodied in United Nations Universal Declaration of Human Rights (UDHR) <https://www.un.org/en/about-us/universal-declaration-of-human-rights> International Labour Organization (ILO) [https://www.ilo.org/global/lang--en/index.htm](https://www.ilo.org/global/lang-en/index.htm) conventions as ratified by Canada.
- D8.2 The City of Winnipeg is committed and requires its Contractors and their Subcontractors, to be committed to upholding and promoting international human and labour rights, including fundamental principles and rights at work covered by ILO eight (8) fundamental conventions and the United Nations Universal Declaration of Human Rights which includes child and forced labour.
- D8.3 Upon request from the Contract Administrator, the Contractor shall provide disclosure of the sources (by company and country) of the raw materials used in the Work and a description of the manufacturing environment or processes (labour unions, minimum wages, safety, etc.).
- D8.4 Failure to provide the evidence required under D8.3, may be determined to be an event of default in accordance with C18.
- D8.5 In the event that the City, in its sole discretion, determines the Contractor to have violated the requirements of this section, it will be considered a fundamental breach of the Contract and the Contractor shall pay to the City a sum specified by the Contract Administrator in writing ("Unfair Labour Practice Penalty"). Such a violation shall also be considered an Event of Default, and shall entitle the City to pursue all other remedies it is entitled to in connection with same pursuant to the Contract.
- D8.5.1 The Unfair Labour Practice Penalty shall be such a sum as determined appropriate by the City, having due regard to the gravity of the Contractor's violation of the above requirements, any cost of obtaining replacement goods/ services or rectification of the breach, and the impact upon the City's reputation in the eyes of the public as a result of same.
- D8.5.2 The Contractor shall pay the Unfair Labour Practice Penalty to the City within thirty (30) Calendar Days of receiving a demand for same in accordance with D8.5. The City may also hold back the amount of the Unfair Labour Practice Penalty from payment for any amount it owes the Contractor.
- D8.5.3 The obligations and rights conveyed by this clause survive the expiry or termination of this Contract, and may be exercised by the City following the performance of the Work, should the City determine, that a violation by the Contractor of the above clauses has occurred following same. In no instance shall the Unfair Labour Practice Penalty exceed the total of twice the Contract value.

D9. FURNISHING OF DOCUMENTS

- D9.1 Upon award of the Contract, the Contractor will be provided with 'issued for construction' Contract Documents electronically, including Drawings in PDF format only.

SUBMISSIONS

D10. AUTHORITY TO CARRY ON BUSINESS

- D10.1 The Contractor 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 Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on

business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D11. SAFE WORK PLAN

- D11.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.
- D11.2 The Safe Work Plan shall be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Purchasing Division website at <http://www.winnipeg.ca/matmgt/safety/default.stm>
- D11.3 Notwithstanding B12.4 at any time during the term of the Contract, the City may, at their sole discretion and acting reasonably, require an updated COR Certificate or Annual Letter of good Standing. A Contractor, who fails to provide a satisfactory COR Certificate or Annual Letter of good Standing, will not be permitted to continue to perform any Work.

D12. INSURANCE

- D12.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability, broad form property damage cover and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
 - (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. 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) an all risks Installation Floater carrying adequate limits to cover all machinery, equipment, supplies and/or materials intended to enter into and form part of any installation.
- D12.2 Deductibles shall be borne by the Contractor.
- D12.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in the C4.1 for the return of the executed Contract Documents, as applicable.
- D12.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

D13. CONTRACT SECURITY

- D13.1 The Contractor shall provide and maintain the performance bond and the labour and material payment bond until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; and
 - (b) a labour and material payment bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H2: Labour and Material Payment Bond), in an amount equal to fifty percent (50%) of the Contract Price.

- D13.1.1 Where the contract security is a performance bond, it may be submitted in hard copy or digital format. If submitted in digital format the contract security must meet the following criteria:
- (a) the version submitted by the Contractor must have valid digital signatures and seals;
 - (b) the version submitted by the Contractor must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.
 - (c) the version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.
 - (d) the verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
 - (e) the results of the verification must provide a clear, immediate and printable indication of pass or fail regarding D13.1(b).
- D13.1.2 Digital bonds failing the verification process will not be considered to be valid and may be determined to be an event of default in accordance with C18.1. If a digital bond fails the verification process, the Contractor may provide a replacement bond (in hard copy or digital format) within seven (7) Calendar Days of the City's request or within such greater period of time as the City in their discretion, exercised reasonably, allows.
- D13.1.3 Digital bonds passing the verification process will be treated as original and authentic.
- D13.2 The Contractor shall provide the Contract Administrator identified in D5 with the required performance and labour and material payment bonds within seven (7) Calendar Days of notification of the award of the Contract by way of an award letter and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.
- D13.3 The Contractor shall, as soon as practicable after entering into a contract with a Subcontractor:
- (a) give the Subcontractor written notice of the existence of the labour and material payment bond in D13.1(b); and
 - (b) post a notice of the bond and/or a copy of that bond in a conspicuous location at the Site of the Work.

D14. SUBCONTRACTOR LIST

- D14.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at or prior to a pre-construction meeting, or at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the C4.1 for the return of the executed Contract Documents, if applicable.

D15. DETAILED WORK SCHEDULE

- D15.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in the General Conditions for the return of the executed Contract Documents, as applicable.
- D15.2 The detailed work schedule shall consist of the following:
- (a) a critical path method (C.P.M.) schedule for the Work;
 - (b) a Gantt chart for the Work based on the C.P.M. schedule; and

all acceptable to the Contract Administrator.

D15.3 Further to D15.2(a), the C.P.M. schedule shall clearly identify the start and completion dates of all of the major/critical activities/tasks making up the Work as well as showing those activities/tasks on the critical path.

D15.4 Further to D15.2(b), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

D16. REQUIREMENTS FOR SITE ACCESSIBILITY PLAN

D16.1 The Contractor shall provide the Contract Administrator with an Accessibility Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.

D16.2 The Accessibility Plan shall demonstrate how the Contractor will accommodate the safe passage of pedestrians and cyclists in accordance with the Manual of Temporary Traffic Control, the Contract Drawings, Staging Plans, and Streets By-Law No. 1481/77 at all times for the duration of the Construction. Unless noted in the Contract, the Accessibility Plan must include a written plan for the following:

- (a) How the Contractor will maintain at least one crossing in each direction for each intersection (one north/south crosswalk and one east/west crosswalk).
- (b) How the Contractor will maintain access to bus stops within the site.
- (c) How the Contractor will maintain access to pedestrian corridors and half signals.
- (d) How the Contractor will maintain cycling facilities.
- (e) How the Contractor will maintain access to residents and businesses unless otherwise noted in the Contract.
- (f) Any required detour signage at adjacent crossings to facilitate sidewalk or active transportation pathway closures.

D16.3 The Accessibility Plan may also include figures, sketches, or drawings to demonstrate the proposed plan.

D16.4 The Accessibility Plan shall include written details on how the Contractor intends to review, maintain, and document all items related to the Accessibility Plan on-site during Construction, including, but not limited to:

- (a) Signage
- (b) Temporary Ramping
- (c) Transit Stops
- (d) Detour Signage

D16.5 At minimum, the Contractor shall review the site conditions on a daily basis to ensure that all features related to the Accessibility Plan are in place. The site review is intended to correct deficiencies as a result of unforeseen events such as wind, traffic, or the general public. Deficiencies that are direct result of the Contractors actions must be corrected immediately.

D16.6 Any changes to the Accessibility Plan must be approved by the Contract Administrator.

D16.7 Upon request from the Contract Administrator, the Contractor shall provide records demonstrating that the site has been maintained.

D16.8 Deficiencies as a direct result of actions by the Contractor that are not immediately corrected and/or failure to produce records that demonstrate that the site was maintained in compliance with the Accessibility Plan may result in a pay adjustment via the monthly Progress Payment. The rate of pay adjustment will be as per the following schedule:

- (a) First Offence – A warning will be issued and documented in the weekly or bi-weekly site meeting.
- (b) Second Offence – A field instruction to immediately correct the site will be issued by the Contract Administrator.
- (c) Third and subsequent Offences – A pay reduction will be issued in the amount of \$250.00 per instance and per day.

SCHEDULE OF WORK

D17. COMMENCEMENT

- D17.1 The Contractor shall not commence any Work until they are in receipt of an award letter from the Award Authority authorizing the commencement of the Work.
- D17.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D10;
 - (ii) evidence of the workers compensation coverage specified in C6.15;
 - (iii) the twenty-four (24) hour emergency response phone number specified in D6.2.
 - (iv) the Safe Work Plan specified in D11;
 - (v) evidence of the insurance specified in D12;
 - (vi) the contract security specified in D13;
 - (vii) the subcontractor list specified in D14;
 - (viii) the detailed work schedule specified in D15;
 - (ix) the Requirements for Site Accessibility Plan specified in D16; and
 - (x) the direct deposit application form specified in D30
 - (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
- D17.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the award letter.

D18. WORKING DAYS

- D18.1 Further to C1.1(tt);
- D18.1.1 The Contract Administrator will determine daily if a Working Day has elapsed and will record their assessment. On a weekly basis the Contract Administrator will provide the Contractor with a record of the Working Days assessed for the preceding week. The Contractor shall sign each report signifying that they agree with the Contract Administrator's determination of the Working Days assessed for the report period.
- D18.1.2 Work done to restore the Site to a condition suitable for Work, shall not be considered "work" as defined in the definition of a Working Day.

D19. RESTRICTED WORK HOURS

- D19.1 Further to 3.10 of CW 1130, the Contractor shall require written permission forty-eight (48) hours in advance from the Contract Administrator for any work to be performed between 2000 hours and 0700 hours, or on Saturdays, Sundays, Statutory Holidays and or Civic Holidays.
- D19.2 The following work hour restrictions shall also apply:
- (a) Diamond Grinding on Eastbound Sterling Lyon Parkway shall be completed between 0700 and 1800.

- (b) Diamond Grinding on Logan Avenue shall be completed between 0700 and 1800.

D20. WORK BY OTHERS

D20.1 Further to C6.25, the Contractor's attention is directed to the fact that other Contractors, the personnel of Utilities and the staff of the City may be working within the project limit, approach roadway, adjacent roadways or right-of-way. The activities of these agencies may coincide with the Contractors execution of work and it will be the Contractor's responsibility to cooperate to the fullest extent with other personnel working in the area, and such cooperation is an obligation of the Contractor under the terms of Contract.

D20.2 Work by others on or near the Site will include but not necessarily be limited to:

- (a) City of Winnipeg Traffic Services – Install permanent signage following the completion of construction. Fabricate, supply and place Wayfinding Signage as required. It is expected that the Contractor will coordinate with Traffic Services as required.
- (b) City of Winnipeg Traffic Management – Develop wording for Wayfinding Signage. Approve all lane closure requests and detour routes.
- (c) City of Winnipeg Traffic Signals – Traffic signal loops may require decommissioning and reinstallation.
- (d) Winnipeg Transit – The Contractor will be required to coordinate with Winnipeg Transit for stop closures and/or temporary relocations in order to maintain service and minimize disruptions.
- (e) Manitoba Hydro – The Contractor will be required to coordinate all utility watches with Manitoba Hydro as required.
- (f) Bell MTS – The Contractor will be required to coordinate all utility watches with Bell MTS as required.
- (g) Railway Authorities – The Contractor is expected to coordinate flagging and track protection with affected railway authorities. The Contractor will be required to follow the rail safety procedures of the respective railway authority.
 - (i) Sterling Lyon Parkway – CN (west crossing), CPKC (east crossing)
 - (ii) Bison Drive – CN (at east limit)
 - (iii) Logan Avenue – CPKC (at east limit)
 - (iv) Camiel Sys Street – CN (490m east of Plessis Road)

D20.3 Further to D20.1 the Contractor shall cooperate and coordinate all activities with all parties performing required Work by Others. The Contractor must include and accommodate Work by Others identified in D20.2 or additional parties, in their construction schedule as per D15 and accommodate the necessary area on Site required for the Work by Others to complete the Work.

D21. SEQUENCE OF WORK

D21.1 Further to C6.1, the sequence of work shall be as follows:

D21.1.1 Construction activity is to be limited to a single lane of the roadway at a time. No construction shall commence on the subsequent lanes until all work is completed on the lane under construction or as otherwise permitted by the Contract Administrator.

D21.1.2 It is expected that the Contractor will grow the Work Zone as construction progresses in order to minimize traffic disruptions.

D21.1.3 Partial Depth Concrete Repairs shall be completed prior to Full Depth Repairs.

D21.1.4 Initial planing operations are to be limited to the gutter lane of the roadway. Planing of the subsequent lanes of the roadway shall not commence until the Contract Administrator has approved the opening of the previous lanes to traffic following placement of the first lift of asphalt.

- (a) Traffic will not be permitted to be maintained on a milled asphalt surface.
- D21.1.5 The Contractor shall delay placing the final lift of asphalt on the of the roadway, so that the final lift of all lanes is placed in one operation.
- D21.1.6 Asphalt drop offs will not be permitted to remain overnight.
- D21.1.7 Construction activity will be limited to 3 sites at any one time with the exception of Diamond Grinding.
- (a) Diamond Grinding activities will be limited to one site at a time.
- (b) Lagimodiere Northbound between Sage Creek Boulevard and Fermor Avenue will be considered a single site.
- D21.1.8 Construction on Haggart Avenue may not be completed concurrently with work on Meridian Drive.
- D21.1.9 Construction on Camiel Sys Street may not be completed concurrently with work on Mazonod Road.
- D21.1.10 Sage Creek Boulevard is to be constructed between July 1, 2024 and August 30, 2024.
- D21.1.11 Diamond Grinding on Logan Avenue is to be completed between July 1, 2024 and August 30, 2024.

D22. SUBSTANTIAL PERFORMANCE

- D22.1 The Contractor shall achieve Substantial Performance within seventy (70) consecutive Working Days of the commencement of the Work as specified in D17.
- D22.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D22.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

D23. TOTAL PERFORMANCE

- D23.1 The Contractor shall achieve Total Performance within seventy five (75) consecutive Working Days of the commencement of the Work as specified in D17.
- D23.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be re-inspected.
- D23.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D24. LIQUIDATED DAMAGES

- D24.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Working Day for each and every Working Day following the days fixed herein for same during which such failure continues:
- (a) Substantial Performance – three thousand dollars (\$3000);

(b) Total Performance – one thousand dollars (\$1000);

D24.2 The amounts specified for liquidated damages in D24.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Substantial Performance or Total Performance by the days fixed herein for same.

D24.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D25. SUPPLY CHAIN DISRUPTION SCHEDULE DELAYS

D25.1 The City acknowledges that the schedule for this Contract may be impacted by the Supply Chain Disruption. Commencement and progress of the Work shall be performed by the Contractor with due consideration to the delivery requirements and schedule identified in the Contract, in close consultation with the Contract Administrator.

D25.2 If the Contractor is delayed in the performance of the Work by reason of the Supply Chain Disruption, the Work schedule may be adjusted by a period of time equal to the time lost due to such delay and costs related to such delay will be determined as identified herein.

D25.3 A minimum of seven (7) Calendar Days prior to the commencement of Work, the Contractor shall declare whether a Supply Chain Disruption will affect the start date. The Contractor shall provide sufficient evidence that the delay is directly related to ordering of Material or Goods, production and/or manufacturing schedules or availability of staff as appropriate s.

D25.4 For any delay related to Supply Chain Disruption and identified after Work has commenced, the Contractor shall within seven (7) Calendar Days of becoming aware of the anticipated delay declare the additional delay and shall provide sufficient evidence as indicated in D25.3. Failure to provide this notice will result in no additional time delays being considered by the City.

D25.5 The Work schedule, including the durations identified in D19 to D23 where applicable, will be adjusted to reflect delays accepted by the Contract Administrator. No additional payment will be made for adjustment of schedules except where seasonal work, not previously identified in the Contract, is carried over to the following construction season.

D25.6 Where Work not previously identified is being carried over solely as a result of delays related to Supply Chain Disruption, as confirmed by the Contract Administrator, the cost of temporary works to maintain the Work in a safe manner until Work recommences, will be considered by the Contract Administrator. Where the Work is carried over only partially due to Supply Chain Disruption, a partial consideration of the cost of temporary works will be considered by the Contract Administrator.

D25.7 Any time or cost implications as a result of Supply Chain Disruption and in accordance with the above, as confirmed by the Contract Administrator, shall be documented in accordance with C7.

D26. SCHEDULED MAINTENANCE

D26.1 The Contractor shall perform the following scheduled maintenance in the manner and within the time periods required by the Specifications:

(a) Reflective Crack Maintenance as specified in CW 3520 – R7;

(b) Sod Maintenance as specified in CW 3510 – R10

D26.2 Determination of Substantial Performance and Total Performance shall be exclusive of scheduled maintenance identified herein. All scheduled maintenance shall be completed prior to the expiration of the warranty period. Where the scheduled maintenance cannot be completed during the warranty period, the warranty period shall be extended for such period of time as it takes the Contractor to complete the scheduled maintenance.

CONTROL OF WORK

D27. JOB MEETINGS

- D27.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.
- D27.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever they deem it necessary.

D28. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D28.1 Further to C6.26, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

D29. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D29.1 Further to B12.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at their sole discretion and acting reasonably, require updated proof of compliance, as set out in B12.4.

MEASUREMENT AND PAYMENT

D30. PAYMENT

- D30.1 Further to C12, the City shall make payments to the Contractor by direct deposit to the Contractor's banking institution, and by no other means. Payments will not be made until the Contractor has made satisfactory direct deposit arrangements with the City. Direct deposit application forms are at https://winnipeg.ca/finance/files/Direct_Deposit_Form.pdf.

D31. FUEL PRICE ADJUSTMENT

- D31.1 The Contract is subject to a fuel price adjustment which will be calculated monthly based on eligible Work completed utilizing the following mathematical formulas;

- (a) where the price of fuel has increased - $((CFI/BFI)-1.15) \times Q \times FF$; and
- (b) where the price of fuel has decreased - $((CFI/BFI)-0.85) \times Q \times FF$; where
- (i) BFI = base fuel index
 - (ii) CFI = current fuel index
 - (iii) FF = fuel factor
 - (iv) Q = monetary value of Work applied in the calculation.

- D31.1.1 Eligible Work will be determined in accordance with D31.5.

- D31.1.2 The base fuel index (BFI) will be the retail price of fuel identified on the Submission Deadline based on latest published "Monthly average retail prices for gasoline and fuel by geography" for Winnipeg, published by [Statistics Canada, Table 18-10-0001-01](#). The BFI is a blended rate based on 15% regular unleaded gasoline at self-service filling stations and 85% diesel fuel at self-service filling stations.

- D31.1.3 The current fuel index (CFI) based on the above blended rate will be determined for each monthly progress estimate and applied on the following progress estimate as a change order once rates are published by Statistics Canada.
- D31.1.4 A Fuel Factor (FF) rate of the monetary value of all eligible Work completed that month based on the Contract unit prices will be used to calculate the assumed apportioned cost of fuel.
- D31.2 Fuel cost adjustments may result in additional payment to the Contractor or credit to the City within the Contract by way of a monthly change order.
- D31.3 The fuel escalation or de-escalation adjustment will not be applied if the CFI is within $\pm 15\%$ of the BFI.
- D31.4 Fuel escalation adjustments will not be considered beyond the Substantial Performance/Critical Stages except where those dates/Working Days are adjusted by change order. Fuel de-escalation adjustments will apply for Work that extends beyond the dates/Working Days specified for Substantial Performance/Critical Stages.
- D31.5 The Fuel Factor (FF) rates will be set as follows:
- (a) The Fuel Factor rate shall be set at 2.7% of the monetary value of all Work based on unit prices.

WARRANTY

D32. WARRANTY

- D32.1 Notwithstanding C13.2, the warranty period shall begin on the date of Substantial Performance and shall expire one (1) year thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.
- D32.2 Notwithstanding C13.2 or D32.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Substantial Performance if:
- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use.
- D32.2.1 In such case the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin.

DISPUTE RESOLUTION

D33. DISPUTE RESOLUTION

- D33.1 If the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator, the Contractor shall act in accordance with the Contract Administrator's opinion, determination, or decision unless and until same is modified by the process followed by the parties pursuant to D33.
- D33.2 The entire text of C21.4 is deleted, and amended to read: "Intentionally Deleted"
- D33.3 The entire text of C21.5 is deleted, and amended to read:
- (a) If Legal Services has determined that the Disputed Matter may proceed in the Appeal Process, the Contractor must, within ten (10) Business Days of the date of the Legal Services Response Letter, submit their written Appeal Form, in the manner and format set out on the City's Purchasing Website, to the Chief Administrative Officer, and to the Contract Administrator. The Contractor may not raise any other disputes other than the Disputed Matter in their Appeal Form.

- D33.4 Further to C21, prior to the Contract Administrator's issuance of a Final Determination, the following informal dispute resolution process shall be followed where the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator ("Dispute"):
- (a) In the event of a Dispute, attempts shall be made by the Contract Administrator and the Contractor's equivalent representative to resolve Disputes within the normal course of project dealings between the Contract Administrator and the Contractor's equivalent representative.
 - (b) Disputes which in the reasonable opinion of the Contract Administrator or the Contractor's equivalent representative cannot be resolved within the normal course of project dealings as described above shall be referred to a without prejudice escalating negotiation process consisting of, at a minimum, the position levels as shown below and the equivalent Contractor representative levels:
 - (i) The Contract Administrator;
 - (ii) Supervisory level between the Contract Administrator and applicable Department Head;
 - (iii) Department Head.
- D33.4.1 Names and positions of Contractor representatives equivalent to the above City position levels shall be determined by the Contractor and communicated to the City at the pre-commencement or kick off meeting.
- D33.4.2 As these negotiations are not an adjudicative hearing, neither party may have legal counsel present during the negotiations.
- D33.4.3 Both the City and the Contractor agree to make all reasonable efforts to conduct the above escalating negotiation process within twenty (20) Business Days, unless both parties agree, in writing, to extend that period of time.
- D33.4.4 If the Dispute is not resolved to the City and Contractor's mutual satisfaction after discussions have occurred at the final escalated level as described above, or the time period set out in D33.4.3, as extended if applicable, has elapsed, the Contract Administrator will issue a Final Determination as defined in C1.1(v), at which point the parties will be governed by the Dispute Resolution process set out in C21.

INDEMNITY

D34. INDEMNITY

- D34.1 Indemnity shall be as stated in C17.
- D34.2 Notwithstanding C17.1, the Contractor shall save harmless and indemnify the City in the amount of twice the Contract Price or five million dollars (\$5,000,000), whichever is greater, against all costs, damages or expenses arising from actions, claims, demands and proceedings, by whomsoever brought, made or taken as a result of negligent acts or negligent omissions of the Contractor, their Subcontractors, employees or agents in the performance or purported performance of the Work, and more particularly from:
- (a) accidental injury to or death of any person whether retained by or in the employ of the Contractor or not, arising directly or indirectly by reason of the performance of the Work, or by reason of any trespass on or damage to property;
 - (b) damage to any property owned in whole or in part by the City, or which the City by duty or custom is obliged, directly or indirectly, in any way or to any degree, to construct, repair or maintain;
 - (c) damage to, or trespass or encroachment upon, property owned by persons other than the City;
 - (d) any claim for lien or trust claim served upon the City pursuant to The Builders' Liens Act;
 - (e) failure to pay a Workers Compensation assessment, or Federal or Provincial taxes;

- (f) unauthorized use of any design, device, material or process covered by letters patent, copyright, trademark or trade name in connection with the Work;
- (g) inaccuracies in any information provided to the City by the Contractor.

D34.3 Further to C17, The City shall save harmless and indemnify the Contractor in the amount of twice the Contract Price or five million dollars (\$5,000,000), whichever is greater, against all costs, damages or expenses arising from actions, claims, demands and proceedings, by whomsoever brought, made or taken as a result of negligent acts or negligent omissions of the City, their employees or agents in the performance of its obligation under the Contract.

THIRD PARTY AGREEMENTS

D35. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

D35.1 In the event that funding for the Work of the Contract is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, the following terms and conditions shall apply, as required by the applicable funding agreements.

D35.2 Further to D35.1, in the event that the obligations in D35 apply, actual costs legitimately incurred by the Contractor as a direct result of these obligations ("Funding Costs") shall be determined by the actual cost to the Contractor and not by the valuation method(s) outlined in C7.4. In all other respects Funding Costs will be processed in accordance with Changes in Work under C7.

D35.3 For the purposes of D35:

- (a) "**Government of Canada**" includes the authorized officials, auditors, and representatives of the Government of Canada; and
- (b) "**Government of Manitoba**" includes the authorized officials, auditors, and representatives of the Government of Manitoba.

D35.4 Modified Insurance Requirements

D35.4.1 If not already required under the insurance requirements identified in D12, the Contractor will be required to provide wrap-up liability insurance in an amount of no less than two million dollars (\$2,000,000) inclusive per occurrence. Such policy will be written in the joint names of the City, Contractor, Consultants and all sub-contractors and sub-consultants and include twelve (12) months completed operations. The Government of Manitoba and their Ministers, officers, employees, and agents shall be added as additional insureds.

D35.4.2 If not already required under the insurance requirements identified in D12, the Contractor will be required to provide builders' risk insurance (including boiler and machinery insurance, as applicable) providing all risks coverage at full replacement cost, or such lower level of insurance that the City may identify on a case-by-case basis, such as an installation floater.

D35.4.3 The Contractor shall obtain and maintain third party liability insurance with minimum coverage of two million dollars (\$2,000,000.00) per occurrence on all licensed vehicles operated at the Site. In the event that this requirement conflicts with another licensed vehicle insurance requirement in this Contract, then the requirement that provides the higher level of insurance shall apply.

D35.4.4 Further to D12.3, insurers shall provide satisfactory Certificates of Insurance to the Government of Manitoba prior to commencement of Work as written evidence of the insurance required. The Certificates of Insurance must provide for a minimum of thirty (30) days' prior written notice to the Government of Manitoba in case of insurance cancellation.

D35.4.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.

D35.5 Indemnification By Contractor

- D35.5.1 In addition to the indemnity obligations outlined in C17 of the General Conditions for Construction, the Contractor agrees to indemnify and save harmless the Government of Canada and the Government of Manitoba and each of their respective Ministers, officers, servants, employees, and agents from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from this Contract or the Work, or from the goods or services provided or required to be provided by the Contractor, except those resulting from the negligence of any of the Government of Canada's or the Government of Manitoba's Ministers, officers, servants, employees, or agents, as the case may be.
- D35.5.2 The Contractor agrees that in no event will Canada or Manitoba, their respective officers, servants, employees or agents be held liable for any damages in contract, tort (including negligence) or otherwise, for:
- (a) any injury to any person, including, but not limited to, death, economic loss or infringement of rights;
 - (b) any damage to or loss or destruction of property of any person; or
 - (c) any obligation of any person, including, but not limited to, any obligation arising from a loan, capital lease or other long term obligation;
- in relation to this Contract or the Work.
- D35.6 Records Retention and Audits
- D35.6.1 The Contractor shall maintain and preserve accurate and complete records in respect of this Contract and the Work, including all accounting records, financial documents, copies of contracts with other parties and other records relating to this Contract and the Work during the term of the Contract and for at least six (6) years after Total Performance. Those records bearing original signatures or professional seals or stamps must be preserved in paper form; other records may be retained in electronic form.
- D35.6.2 In addition to the record keeping and inspection obligations outlined in C6 of the General Conditions for Construction, the Contractor shall keep available for inspection and audit at all reasonable times while this Contract is in effect and until at least six (6) years after Total Performance, all records, documents, and contracts referred to in D35.6.1 for inspection, copying and audit by the City of Winnipeg, the Government of Manitoba and/or the Government of Canada and their respective representatives and auditors, and to produce them on demand; to provide reasonable facilities for such inspections, copying and audits, to provide copies of and extracts from such records, documents, or contracts upon request by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada and their respective representatives and auditors, and to promptly provide such other information and explanations as may be reasonably requested by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada from time-to-time.
- D35.7 Other Obligations
- D35.7.1 The Contractor consents to the City providing a copy of the Contract Documents to the Government of Manitoba and/or the Government of Canada upon request from either entity.
- D35.7.2 If the Lobbyists Registration Act (Manitoba) applies to the Contractor, the Contractor represents and warrants that it has filed a return and is registered and in full compliance with the obligations of that Act, and covenants that it will continue to comply for the duration of this Contract.
- D35.7.3 The Contractor shall comply with all applicable legislation and standards, whether federal, provincial, or municipal, including (without limitation) labour, environmental, and human rights laws, in the course of providing the Work.
- D35.7.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards

approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.

D35.7.5 The Contractor represents and warrants that no current or former public servant or public office holder, to whom the Value and Ethics Code for the Public Sector, the Policy on Conflict of Interest and Post Employment, or the Conflict of Interest Act applies, shall derive direct benefit from this Contract, including any employment, payments, or gifts, unless the provision or receipt of such benefits is in compliance with such codes and the legislation.

D35.7.6 The Contractor represents and warrants that no member of the House of Commons or of the Senate of Canada or of the Legislative Assembly of Manitoba is a shareholder, director or officer of the Contractor or of a Subcontractor, and that no such member is entitled to any benefits arising from this Contract or from a contract with the Contractor or a Subcontractor concerning the Work.

FORM H1: PERFORMANCE BOND
(See D13)

KNOW EVERYONE BY THESE PRESENTS THAT

_____ ,
(hereinafter called the "Principal"), and

_____ ,
(hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

_____ dollars (\$_____)

of lawful money of Canada to be paid to the Obligee, or its successors or assigns, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee for

TENDER NO. 358-2024

2024 STREETS MAINTENANCE PRESERVATION PROGRAM

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

_____ day of _____, 20_____ .

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

FORM H2: LABOUR AND MATERIAL PAYMENT BOND
(See D13)

KNOW EVERYONE BY THESE PRESENTS THAT

his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Principal"), and

his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), for the use and benefit of claimants as herein below defined, in the amount of

_____ dollars (\$_____)

of lawful money of Canada, for the payment whereof we, the Principal and the Surety jointly and severally bind ourselves firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee for

TENDER NO. 358-2024

2024 STREETS MAINTENANCE PRESERVATION PROGRAM

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall promptly make payment to all claimants as hereinafter defined, for all labour, service and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void, otherwise it shall remain in full force and effect subject, however, to the following conditions:

- (a) A claimant is defined as one having a direct contract with the Principal for labour, service and material, or any of them, used or reasonably required for use in the performance of the contract, labour, service and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment (but excluding rent of equipment where the rent pursuant to an agreement is to be applied towards the purchase price thereof) directly applicable to the Contract;
- (b) The above-named Principal and Surety hereby jointly and severally agree with the Obligee that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work, labour or service was done or performed, or materials were furnished by such claimant, may sue on this bond, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon;
- (c) No suit or action shall be commenced hereunder by any claimant
 - (i) unless claimant shall have given written notice to the Principal and the Surety above-named, within one hundred and twenty (120) days after such claimant did or performed the last of the work, labour or service, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work, labour or service was done or performed. Such notice shall be served by mailing the same by registered mail to the Principal, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the Province of Manitoba;

- (ii) after the expiration of one (1) year following the date on which Principal ceased work on said Contract; including work performed under the guarantees provided in the Contract;
 - (iii) other than in a court of competent jurisdiction in the Province of Manitoba.
- (d) The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.
- (e) The Surety shall not be liable for a greater sum than the specified penalty of this bond.

The Principal and Surety hereby agree that The Guarantors' Liability Act (Manitoba) shall apply to this Bond.

IN TESTIMONY WHEREOF, the Principal has hereunto set its hand affixed its seal, and the Surety has caused these presents to be sealed and with its corporate seal duly attested by the authorized signature of its signing authority this

_____ day of _____, 20____.

SIGNED AND SEALED
in the presence of:

(Witness as to Principal if no seal)

(Name of Principal)

Per: _____ (Seal)

Per: _____

(Name of Surety)

By: _____ (Seal)
(Attorney-in-Fact)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 *The City of Winnipeg Standard Construction Specifications* in their entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Purchasing Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Tender shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B6. In every instance where a brand name or design specification is used, the City will also consider approved equals and/or approved alternatives in accordance with B6.
- E1.4 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
P-3582-1	TITLE PAGE AND DRAWING LIST	A1
P-3582-2	STERLING LYON PARKWAY – EAST BOUND – KENASTON TO STA. 0+660	A1
P-3582-3	STERLING LYON PARKWAY – EAST BOUND – STA. 0+660 TO 1+300	A1
P-3582-4	STERLING LYON PARKWAY – EAST BOUND – STA. 1+300 TO VICTOR LEWIS DRIVE	A1
P-3582-5	LAGIMODIERE BOULEVARD – SOUTHBOUND – ASPHALT SHOULDER – WARMAN ROAD TO DUGALD ROAD	A1
P-3582-6	BISON DRIVE – WEST BOUND – ASPHALT SHOULDER – MARKHAM ROAD TO 75m WEST OF PEMBINA HIGHWAY	A1
P-3582-7	BISON DRIVE – WEST BOUND – MILL AND FILL – MARKHAM ROAD TO 75m WEST OF PEMBINA	A1
P-3582-8	LOGAN AVENUE – EAST AND WEST BOUND – BLAKE STREET TO WESTON STREET	A1
P-3582-9	CAMIEL SYS STREET – EAST AND WEST BOUND – MAZENOD ROAD TO STA. 0+690	A1
P-3582-10	CAMIEL SYS STREET – EAST AND WEST BOUND – STA. 0+690 TO 1+390	A1
P-3582-11	CAMIEL SYS STREET – EAST AND WEST BOUND – STA. 1+390 TO PLESSIS ROAD	A1
P-3582-12	MAZENOD ROAD – NORTH AND SOUTH BOUND – DEBAETS STREET TO CAMIEL SYS STREET	A1
P-3582-13	HAGGART AVENUE – EAST AND WEST BOUND – MERIDIAN DRIVE TO 195 HAGGART AVENUE	A1
P-3582-14	MERIDIAN DRIVE – NORTH AND SOUTH BOUND – DISCOVERY PLACE TO INKSBROOK DRIVE	A1
P-3582-15	SAGE CREEK BOULEVARD – EAST AND WEST BOUND – LAGIMODIERE BOULEVARD TO STA. 0+700	A1

<u>Drawing No.</u>	<u>Drawing Name/Title</u>	<u>Drawing (Original) Sheet Size</u>
P-3582-16	SAGE CREEK BOULEVARD – EAST AND WEST BOUND – STA. 0+700 TO 1+340	A1
P-3582-17	SAGE CREEK BOULEVARD – EAST AND WEST BOUND – STA. 1+340 TO WARDE AVENUE	A1
P-3582-18	LAGIMODIERE BOULEVARD – NORTH BOUND – FERMOR AVENUE TO STA 0+670	A1
P-3582-19	LAGIMODIERE BOULEVARD – NORTH BOUND – STA. 0+670 TO1+390	A1
P-3582-20	LAGIMODIERE BOULEVARD – NORTH BOUND – STA. 1+390 TO BISHOP GRANDIN BOULEVARD	A1
P-3582-21	LAGIMODIERE BOULEVARD – NORTH BOUND – BISHOP GRANDIN BOULEVARD TO 145m NORTH OF SAGE CREEK BOULEVARD	A1

E2. MOBILIZATION AND DEMOBILIZATION PAYMENT

DESCRIPTION

- E2.1 This Specification shall cover all operations relating to the mobilization and demobilization of the Contractor to the project location(s).
- E2.2 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 things necessary for and incidental to the satisfactory performance and completion of all Works as hereinafter specified.
- E2.3 The inclusion of a payment item for the Work under this Specification shall not release or reduce the responsibilities of the Contractor under any other specification in this Contract.

SCOPE OF WORK

- E2.4 Further to C12 of the General Conditions, where Mobilization and Demobilization is included as a bid item, it shall consist of the following, as applicable:
- (a) Mobilization shall include, but not be limited to:
- (i) All activities and associated costs for transportation of the Contractor's personnel, equipment, and operating supplies to the site, and/or sites, and/or between sites;
 - (ii) Establishment of offices, buildings, other necessary general facilities and equipment parking/staging areas for the Contractor's operations at the site or sites;
 - (iii) Premiums paid for performance and payment bonds including coinsurance and reinsurance agreements as applicable;
 - (iv) General cleanup and housekeeping needed maintain a neat and orderly project site(s);
 - (v) Other job related items.
- (b) Demobilization shall include, but not be limited to:
- (i) All activities and costs for transportation of personnel, equipment, and supplies not used in the project from the site, and/or sites, and/or between sites;
 - (ii) Disassembly, removal, and site cleanup and restoration of offices, buildings, and other facilities assembled on the site and/or sites;
 - (iii) Repair of access roads, temporary haul roads, and equipment parking areas leaving the project site in the same or better condition than at the start of the project;
 - (iv) General cleanup and housekeeping needed to restore a neat and orderly project site.

- E2.5 Access to the site, equipment parking, and staging areas are limited to that shown on the drawings or as approved by the Contract Administrator.

MEASUREMENT AND PAYMENT

- E2.6 The lump-sum price for the Mobilization and Demobilization bid item shall not exceed five percent (5.00%) of the total bid price for the Contract.

- E2.6.1 Further to B9, B17, C12 and E2.6, should the lump sum price exceed 5% of the Total Bid Price the lump sum price will be reduced to 5% of the Total Bid Price, the Total Bid Price will be determined using the reduced lump sum price and payment will be based on the reduced lump sum price.

- E2.7 Payment for Mobilization:

- (a) 60% of the lump-sum price will be paid to the Contractor for Mobilization on the first Progress Estimate for the Contract.

- E2.8 Payment for Demobilization:

- (a) The remaining 40% of the lump-sum price will be paid upon:
- (i) Restoration of the site and/or sites to the satisfaction of the Contract Administrator;
 - (ii) Distribution of the Declaration of Total Performance.

- E2.9 Pay Reduction for Accessibility Plan

- (a) The Demobilization payment will be reduced by the number of pay adjustments incurred in accordance with D16 and as determined by the Contract Administrator.

- E2.10 Mobilization and Demobilization will be paid only once (to a maximum of 100%), regardless of the number of times the Contractor mobilizes to the site and/or sites.

E3. PROTECTION OF EXISTING TREES

- E3.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:

- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.
- (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
- (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
- (d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
- (e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.

- E3.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or their designate.

- E3.3 No separate measurement or payment will be made for the protection of trees.

E3.4 Except as required in E3.1(c) and E3.1(e), Elm trees shall not be pruned at any time between April 1 and July 31.

E4. TRAFFIC CONTROL

E4.1 Further to 3.6, 3.7 and 3.8 of CW 1130:

- (a) Where directed by the Contract Administrator, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs to the satisfaction of the Contract Administrator. Payment shall be in accordance with CW3410.
- (b) In accordance with the Manual of Temporary Traffic Control on City Streets (MTTC), the Contractor ("Construction Agency" in the Manual) shall be responsible for placing, maintaining and removing the appropriate temporary traffic control devices as specified by the MTTC, the Contract Drawings, Staging Plans and Traffic Management Plans or by the Traffic Management Branch of the City of Winnipeg Public Works Department. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by their own forces or Subcontractor.
- (c) In addition, the Contractor shall be responsible for **supplying**, placing, maintaining and removing all temporary traffic control signage including regulatory signing including but not limited to:
 - (i) Parking restrictions;
 - (ii) Stopping restrictions;
 - (iii) Turn restrictions;
 - (iv) Diamond lane removal;
 - (v) Full or directional closures on a Regional Street;
 - (vi) Traffic routed across a median;
 - (vii) Full or directional closure of a non-regional street where there is a requirement for regulatory signs (turn restrictions, bus stop relocations, etc.) to implement the closure.
 - (viii) Designated Construction Zones
- (d) The Contractor shall remove and stockpile any regulatory signage not required during construction such as, but not limited to, parking restrictions, turn restrictions and loading restrictions.

E4.2 Upon request from the Contract Administrator, the Contractor shall provide records demonstrating that the site has been maintained.

E4.3 Further to E4.1(c) and E4.1(d) the Contractor shall make arrangements with the Traffic Services Branch of the City of Winnipeg to reinstall the permanent regulatory signs after the Contract Work is complete. The Contractor shall make arrangements to drop off the stockpiled materials to Traffic Services at 495 Archibald Street.

E4.4 Any changes to the approved Traffic Management Plan must be submitted to the Contract Administrator a minimum of five (5) Working Days prior to the required change for approval.

E4.5 If the Contract Administrator determines that the Contractor is not performing Traffic Control in accordance with this specification, Traffic Services may be engaged to perform the Traffic Control. In this event the Contractor shall bear costs charged to the project by the Traffic Services Branch of the City of Winnipeg in connection with the required Works.

E5. TRAFFIC MANAGEMENT

E5.1 Further to 3.7 of CW 1130:

- (a) Single lane closures on intersecting and/or adjoining Regional Streets shall only be permitted during non-peak periods when required for construction activities when approved

by the Traffic Management Branch. Storage/parking of materials, equipment or vehicles is not permitted on Regional Streets at any time unless approved by the Contract Administrator, in consultation with the Traffic Management Branch.

- E5.2 Intersecting local street, median opening and private approach access shall be maintained at all times unless joint/slab repairs or planing/paving operations require temporary closure. Temporary closures are to be staggered such that consecutive intersections are not closed at the same time. Traffic on intersecting regional/collector streets (list streets) shall be maintained at all times as stated in E.5.1 unless planing/paving operations require temporary complete closures. Temporary complete closures shall be no longer than 15 minutes during asphalt planing/paving operations and Diamond Grinding and shall be completed during off peak hours and will require flagpersons onsite to direct and manage traffic.
- E5.3 When no work is being performed on a portion of the site more than three hundred and fifty (350) m in length, the Contractor shall maintain two (2) lanes in the area where no Work is being performed. Depending on what tasks are being performed, the Contractor shall manage traffic around their crews with a moving or growing protected Work Zone as to minimize the length of the closure to the best of their ability.
- E5.4 The Contractor is to provide a minimum Ten (10) Working Day notice prior to the anticipated start of construction on any street requiring a Designated Construction Zone, directional closure or the "Closure of Two Adjacent Lanes of a Four Lane Undivided Street" (Figure 5 & 6 of the MTTC).
- E5.5 Where left turn lanes exist, an additional lane to accommodate the left turn storage lane shall be maintained at all times.
- E5.6 For "Long Term Closures of Half of a Non-Regional Street" (Figure 28 of the MTTC), Work Areas shall not exceed 75m unless previously approved by the City of Winnipeg Traffic Management Branch, Traffic Services and the Contract Administrator. Private approaches and/or side streets should not be included within the work zone limits.
- E5.7 Location Specific Requirements
- E5.7.1 Sterling Lyon Parkway
- (a) A Designated Construction Zone with speed reduction will be required.
 - (b) Only a single eastbound lane is to be closed at any one time.
 - (c) North-south crossing traffic must be maintained at Whidden Gate and Victor Lewis Drive
 - (d) The Contractor will be responsible for coordinating track protection and flagging during construction as required.
- E5.7.2 Logan Avenue
- (a) It is expected that the Contractor will utilize a "Closure of Two Adjacent Lanes of a Four Lane Undivided Street" (Figure 5 & 6 of the MTTC).
 - (b) Coordination with City of Winnipeg Traffic Signals may be required.
 - (c) Staging will be required at the east rail crossing with flagpersons.
 - (d) The Contractor will be responsible for coordinating track protection and flagging during construction as required.
- E5.7.3 Sage Creek Boulevard
- (a) Detours will be required for repairs located in single lane sections.
 - (b) Coordination with Winnipeg Transit will be required for detour timing and durations.
 - (c) Contractor to provide minimum ten (10) business days notice to allow for lane closure approvals, Transit coordination and wayfinding signage.
- E5.7.4 Camiel Sys Street

- (a) It is expected that the Contractor will utilize directional closures to complete the works.
- (b) Coordination with Winnipeg Transit will be required.
- (c) Any closure of commercial approaches is to be coordinated with the affected business at least five (5) days advance of the work.
- (d) Contractor to provide minimum ten (10) business days notice to allow for lane closure approvals, Transit coordination and possible wayfinding signage requirements.
- (e) While a directional closure is in place on Camiel Sys Street., no work will be allowed to commence or be in progress on Mazonod Road.
- (f) The Contractor will be responsible for coordinating track protection and flagging during construction as required.

E5.7.5 Mazonod Road

- (a) It is expected that the Contractor will utilize a directional closure to complete the works.
- (b) Coordination with Winnipeg Transit will be required.
- (c) Any closure of commercial approaches is to be coordinated with the affected business at least five (5) days advance of the work.
- (d) Contractor to provide minimum ten (10) business days notice to allow for lane closure approvals, Transit coordination and possible wayfinding signage requirements.
- (e) While a directional closure is in place on Mazonod Road, no work will be allowed to commence or be in progress on Camiel Sys Street.

E5.7.6 Haggart Avenue

- (a) It is expected that the Contractor will utilize a directional closure to complete the works.
- (b) Any closure of commercial approaches is to be coordinated with the affected business at least five (5) days in advance of the work.
- (c) Contractor to provide minimum ten (10) business days notice to allow for lane closure approvals, Transit coordination and possible wayfinding signage requirements.
- (d) While a directional closure is in place on Haggart Avenue, no work will be allowed to commence or be in progress on Meridian Drive.

E5.7.7 Meridian Drive

- (a) It is expected that the Contractor will utilize "Long Term Closures of Half of a Non-Regional Street" (Figure 28 of the MTTC)
- (b) While work is taking place on Meridian Drive, no work will be allowed to commence or be in progress on Haggart Avenue.
- (c) Any closure of commercial approaches is to be coordinated with the affected business at least five (5) days advance of the work.

E5.7.8 Bison Drive Westbound (Mill and Fill and Shoulder Reconstruction)

- (a) Only a single westbound lane is to be closed at any one time.
- (b) Contractor will be required to maintain two open lanes during Winnipeg Blue Bomber games and special events at the Princess Auto Stadium.
- (c) Traffic will not be permitted to travel on the milled surface with the exception of during Winnipeg Blue Bomber games and special events at the Princess Auto Stadium.
- (d) The Contractor will be responsible for coordinating track protection and flagging during construction as required.

E5.7.9 Lagimodiere Northbound (Mill and Fill)

- (a) A Designated Construction Zone with speed reduction will be required.

- (b) Only a single northbound lane is to be closed at any one time.
- (c) Traffic will not be permitted to travel on the milled surface.

E5.7.10 Lagimodiere Boulevard Southbound (Shoulder Reconstruction)

- (a) A Designated Construction Zone with speed reduction will be required.
- (b) Only a single southbound lane is to be closed at any one time.
- (c) The southbound yield lane onto Dugald Road must be maintained at all times.

E5.8 The Contractor may propose alternative traffic control configurations. Acceptance of these alternatives will be at the discretion of the City of Winnipeg Traffic Management Branch, Traffic Services and the Contract Administrator.

E5.8.1 Flag persons will be necessary to maintain the flow of traffic during certain work operations.

E5.8.2 Should the Contractor be unable to maintain pedestrian or vehicular access to a residence or business, they shall review the planned disruption with the business or residence and the Contract Administrator, and take reasonable measures to minimize the impact. The Contractor shall provide a minimum of 24 hours notification to the affected residence or business and the Contract Administrator, prior to disruption of access.

E5.8.3 Pedestrian access must be maintained in at least two directions at all times. One pedestrian crossing in the east-west direction and one in the north-south direction must be maintained at all intersections at all times.

E5.8.4 Ambulance/emergency vehicle access must be maintained at all times.

E6. PEDESTRIAN SAFETY

E6.1 During the project, a temporary snow fence shall be installed in locations where open excavations are adjacent to pedestrian walkways. The Contractor shall be responsible for installing and maintaining the snow fence in a proper working condition. No measurement for payment shall be made for this work.

E7. WATER OBTAINED FROM THE CITY

E7.1 Further to 3.7 of CW 1120, the Contractor shall pay for all costs, including sewer charges, associated with obtaining water from the City in accordance with the Waterworks and Sewer By-laws.

E8. SURFACE RESTORATIONS

E8.1 Further to 3.3 of CW 1130, when Total Performance is not achieved in the year the Contract is commenced, the Contractor shall temporarily repair any Work commenced and not completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

E9. PARTIAL DEPTH PATCHING OF EXISTING JOINTS

DESCRIPTION

E9.1 General

E9.1.1 This specification covers the Partial Depth Patching of existing concrete pavement joints.

E9.2 Referenced Standard Construction Specifications

- (a) CW 3230 – Full-Depth Patching of Existing Slabs and Joints

(b) CW 3410 – Asphalt Concrete Pavement Works

MATERIALS

E9.3 Asphalt Materials

E9.3.1 Asphalt material will be Type 1A supplied in accordance with Sections 5 and 6 of CW 3410.

E9.4 Tack Coat

E9.4.1 Tack Coat will be undiluted SS-1 emulsified asphalt.

CONSTRUCTION METHODS

E9.5 Planing of Joints

E9.5.1 Plane existing joints designated by the Contract Administrator to a minimum depth of 50 mm and a maximum of depth 90 mm to remove ravelled or deteriorated concrete. Width of joint to be planed will vary with depth.

E9.5.2 Should the depth of joint deterioration exceed the maximum indicated, as determined by the Contract Administrator, the entire joint shall be renewed and paid for in accordance with CW 3230 as a full depth joint repair. Planing completed shall be paid for in accordance with Section E9.7 of this specification.

E9.5.3 Dispose of material in accordance with Section 3.4 of CW 1130.

E9.6 Placement of Asphalt Material

E9.6.1 Prior to placement of asphalt material, the planed joint shall be swept or blow clean of any loose material.

E9.6.2 Apply Tack Coat uniformly on the entire surface of the planed joint. The application rate shall not exceed 0.23 litres per square metre. The planed joint shall be dry prior to applying the tack coat.

E9.6.3 Place and compact asphalt material in accordance with Section 9.3 of CW 3410 to the satisfaction of the Contract Administrator. The finished elevation of the patch shall be flush with surrounding pavement surface.

E9.6.4 Compact the asphalt material to an average 95% of the 75 blow Marshall Density of the paving mixture with no individual test being less than 90 %.

E9.6.5 Ensure that no traffic is allowed to travel over the patched area until the asphalt has cooled to atmospheric temperature.

MEASUREMENT AND PAYMENT

E9.7 Partial Depth Planing of Existing Joints

E9.7.1 Partial Depth Planing of Existing Joints will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Partial Depth Planing of Existing Joints". The area to be paid for will be the total number of square metres of joints planed in accordance with this specification, accepted and measured by the Contract Administrator.

E9.8 Asphalt Patching of Partial Depth Joints

E9.9 Asphalt Patching of Partial Depth Joints will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Asphalt Patching of Partial Depth Joints". The area to be paid for will be the total number of square metres of joints patched in accordance with this specification, accepted, and measured by the Contract Administrator.

E10. PORTLAND CEMENT CONCRETE SIDEWALK WITH BLOCK OUTS FOR INDICATOR SURFACES

DESCRIPTION

E10.1 This specification shall supplement CW 3325-R5 "Portland Cement Concrete Sidewalks".

CONSTRUCTION METHODS

E10.2 Add the following to section 9 :

E10.2.1 As shown on the drawings and as directed by the Contract Administrator, construct sidewalk with block outs and/or monolithic curb and sidewalk with block outs, to allow for the installation of indicator surfaces.

E10.2.2 Verify dimensions of paving stones (indicator surface) prior to construction of the block-outs. Gaps between paving stones and concrete pavement shall not exceed five (5) millimetres.

E10.2.3 Concrete curbs for monolithic curb and sidewalk with block outs shall be constructed in accordance with CW 3240.

MEASUREMENT AND PAYMENT

E10.3 Add the following to section 12 :

E10.3.1 Construction of concrete sidewalks with block outs for indicator surfaces will be measured on surface area basis. The surface area to be paid for shall be the number of square metres constructed in accordance with this specification and accepted by the Contract Administrator, as computed by measurements made by the Contract Administrator.

BASIS OF PAYMENT

E10.4 Add the following to section 13 :

E10.4.1 Construction of concrete sidewalks with block outs for indicator surfaces will be paid for at the Contract Unit Price per square meter for the "Items of Work" listed here below, measured as specified herein, which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the work included in this specification.

E10.4.2 Items of Work:

- (a) 100 mm Sidewalk with Block Outs
- (b) 150 mm Sidewalk with Block Outs
- (c) Monolithic Curb and 100 mm Sidewalk with Block Outs*
- (d) Monolithic Curb and 150 mm Sidewalk with Block Outs*

* - reveal height and type

E10.4.3 Concrete thickness greater than the specified sidewalk thickness as a result of shaping the base material to accommodate the block outs is incidental to the listed Items of Work.

E11. PAVING STONES FOR INDICATOR SURFACES

DESCRIPTION

E11.1 This specification shall supplement CW 3330-R5 "Installation of Interlocking Paving Stones"

MATERIALS

E11.2 Add the following to section 5 :

E11.2.1 Paving Stones for indicator surfaces shall be as shown on the drawings.

E11.2.2 Paving Stones for indicator surfaces shall be :

Barkman Concrete paving stones -
Charcoal Holland Paver (60mm X 210 mm X 210 mm)
<https://www.barkmanconcrete.com/>

Endicott Clay Paver(92mm X 57mm X 194mm)- Dark Ironspot
<https://endicott.com/>

Yankee Hill Brick (92mm X 57mm X 194mm)- Dark Ironspot
<http://yankeehillbrick.com/>

CONSTRUCTION METHODS

E11.3 Add the following to section 9.2 "Preparation of Sub-grade, Sub-base and Sand-base" :

E11.3.1 Preparation of Sand-Base for Paving Stones in Sidewalk Block Outs.

E11.3.2 Place a 15mm layer of bedding sand in the blocked out sidewalk areas.

E11.3.3 The bedding sand shall be spread and levelled so that the paving stones when installed are 5 mm higher than the finished grade.

E11.3.4 No more sand shall be spread than can be covered in with paving stone on the same day.

E11.3.5 The bedding sand shall not be compacted or disturbed prior to laying the paving stones.

E11.4 Add the following to section 9.3 "Installation of Paving Stones" :

E11.4.1 For indicator surface paving stones, commence installation of paving stones against the long edge of the block out to obtain the straightest possible course of installation.

MEASUREMENT AND PAYMENT

E11.5 Add the following to section 12 :

E11.6 Supply and Installation of Paving Stones for Indicator Surfaces

E11.6.1 Paving stones for indicator surfaces will be measured on surface area basis. The surface area to be paid for shall be the number of square metres constructed in accordance with this specification and accepted by the Contract Administrator, as computed by measurements made by the contract Administrator.

BASIS OF PAYMENT

E11.7 Add the following to section 13 :

E11.7.1 The supply and installation of paving stones for indicator surfaces will be paid for at the Contract Unit Price per square meter for "Paving Stone Indicator Surface", measured as specified herein, which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the work included in this specification.

E11.7.2 Concrete thickness greater than the specified sidewalk thickness as a result of shaping the base material to accommodate the block outs is incidental to the listed Items of Work.

E12. MIX DESIGN PROPORTION

E12.1 General

E12.1.1 Further to CW 3310-R18, this Specification covers the mix proportion for all concrete types related to, the construction of Portland Cement Concrete pavements, curbs, gutters,

private approaches, bull-noses, median slabs, medians, safety medians and boulevard splash strips, sidewalks and other related concrete works.

E12.2 Referenced Standard Construction Specifications

(a) CW 3310 – Portland Cement Concrete Pavement Works

E12.3 Mix Design

E12.3.1 Further to CW 3310-R18 Table CW 3310.5, the minimum cementitious contents shall be as follows:

- Type 1 - 380 kg/m³
- Type 2 - 360 kg/m³
- Type 3 - 380 kg/m³
- Type 4 - 380 kg/m³
- Type 5 - 340 kg/m³
- Type 6 - 360 kg/m³

E12.4 Requirements

E12.4.1 The Mix Design Statements for all the concrete shall be submitted to the City of Winnipeg, Research and Standards Engineer for approval.

E12.5 Quality Assurance

E12.5.1 The Contract Administrator shall ensure the frequency and number of quality assurance tests in accordance with CW 3310.

E13. PARTIAL DEPTH CONCRETE REPAIR

E13.1 DESCRIPTION

E13.1.1 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.

E13.2 Referenced Standard Construction Specifications

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

E13.3 MATERIAL

E13.3.1 Patching Material to be used for the partial depth repairs is shall be in accordance with the latest City of Winnipeg Approved Products list

E13.3.2 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

E13.3.3 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 mirostrains
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 %

E13.3.4 Curing Compound

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

E13.3.5 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.

E13.4 EQUIPMENT

E13.4.1 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.

E13.4.2 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.

- E13.4.3 An oil free jetted air compressor shall be used to blow out repairs, vacuum will not be acceptable.
- E13.4.4 Quickie Saw, capable of holding 2-14" diamond tip blades and must be used in conjunction with a cart to make long straight cuts.
- E13.4.5 A mason's hammer for sounding concrete.
- E13.4.6 Calibrated 3 litre (2.84 quart) water container.

E13.5 CONSTRUCTION METHODS

- E13.5.1 Remove any existing AMZ or asphaltic material if applicable from the concrete surface adjacent to the area to be repaired.
- E13.5.2 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.
- E13.5.3 Remove existing sealant 100 mm beyond the ends of the repair.
- E13.5.4 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.
- E13.5.5 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.
- E13.5.6 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.
- E13.5.7 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.
- E13.5.8 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.
- E13.5.9 Use compressed air that has an oil free air jet having sufficient volume and pressure to remove dust and loose particles.
- E13.5.10 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.
- E13.5.11 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.

E13.5.12 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.

E13.5.13 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.

E13.5.14 Saw cut run-outs shall be filled with concrete repair material.

E13.5.15 Uniformly apply water based white pigmented curing compound once the material has set up.

E13.5.16 Sawcut the width and depth to match the existing pavement joint reservoir and reseal.

E13.6 MEASUREMENT AND PAYMENT

E13.6.1 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.

E14. DIAMOND GRINDING

E14.1 DESCRIPTION

E14.1.1 This specification covers the Diamond Grinding of existing concrete pavements.

E14.2 EQUIPMENT

E14.2.1 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.

E14.2.2 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.

E14.3 CONSTRUCTION METHODS

E14.3.1 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 E7.
- (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.

E14.3.2 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.

E14.3.3 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.

E14.3.4 Slurry Handling

- (a) The grinding slurry to be removed from the site shall be collected in water-tight haul units and transported to approved disposal facilities.

E14.3.5 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.

E14.3.6 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.

E14.4 MEASUREMENT AND PAYMENT

- E14.4.1 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 Contract Administrator.
- E14.4.2 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.
- E14.4.3 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 Contract Administrator.
- E14.4.4 No additional measurement or payment will be for testing to net the smoothness requirements of this contract.
- E14.4.5 No additional measurement or payment will be for joint and crack sealing following Diamond Grinding.

E15. SKEWED JOINTS

E15.1 DESCRIPTION

E15.1.1 Further to CW 3230 and CW 3310, this specification covers the requirement for any tie bars, dowels, and dowel assemblies on skewed joints.

E15.2 MATERIALS

E15.2.1 Tie Bars

(a) As per City of Winnipeg Specifications, CW 3230.

E15.2.2 Dowels

(a) As per City of Winnipeg Specifications, CW 3230.

E15.2.3 Skewed Dowel Assemblies

(a) Dowel assemblies will be supplied as per City of Winnipeg Specifications, CW 3310, and will be skewed such that dowels placed in the assembly are parallel the travel direction of the lane.

E15.3 CONSTRUCTION METHODS

E15.3.1 Skewed joints will be identified on site by the Contract Administrator.

E15.3.2 For full depth concrete patches and slabs tied into existing pavement drilled holes for tie bars or dowels will be drilled parallel the travel direction for the lane.

E15.3.3 For consecutive slab repairs requiring joints at 5 meter intervals or less skewed dowel assemblies will be installed. The Contractor shall ensure that the assembly is skewed to match the joint line and the dowels are parallel the travel direction of the lane.

E15.4 MEASUREMENT AND PAYMENT

E15.4.1 Drilled tie bars on a skewed joint will be measured and paid for as per City of Winnipeg Specifications, CW 3230 for "Drilled Tie Bars".

E15.4.2 Drilled dowels on a skewed joint will be measured and paid for as per City of Winnipeg Specifications, CW 3230 for "Drilled Dowels".

E15.4.3 Skewed dowel assemblies will be measured and paid for as per City of Winnipeg Specifications, CW 3310 for "Supply and Installation of Dowel Assemblies".

E16. SOFT EXCAVATION TO EXPOSE UNDERGROUND UTILITIES

E16.1 DESCRIPTION

E16.1.1 This specification covers the soft excavation to expose underground utilities to determine the depth of the underground utility and whether it will interfere with the installation of proposed Works on site.

E16.1.2 These underground utilities include, but are not limited to, Manitoba Hydro cables, MTS cables, existing sewers, and existing water mains.

E16.2 MATERIALS

E16.2.1 Backfill Material

(a) Backfill material for backfill of shafts after hydro-excavation has been completed shall consist of sand as per City of Winnipeg Standard Construction Specification CW 2030.

E16.3 CONSTRUCTION METHODS

E16.3.1 Prior to commencement of any construction works adjacent to underground utilities, the Contractor shall use soft digging or hand excavation to expose the underground utilities.

E16.3.2 Once the elevation of the top of the pipe or duct has been determined the resulting excavation shall be backfilled with bedding sand to the elevation of the existing ground

E16.4 MEASUREMENT AND PAYMENT

E16.4.1 Soft excavation to expose underground utilities will be considered incidental to the Work. No measurement or payment will be made.

E17. OPERATING CONSTRAINTS FOR WORK IN CLOSE PROXIMITY TO CRITICAL WATER INFRASTRUCTURE

DESCRIPTION

E17.1 General

E17.1.1 This Section details operating constraints for all work to be carried out in close proximity to the City feeder mains and other critical water infrastructure. Close proximity shall be deemed to be any construction activity within a 5 m horizontal offset from the centreline of the feeder main/water main, within 5 m of valve chambers and other appurtenances, and any other infrastructure identified below.

E17.2 The following shall be considered critical pipelines and water infrastructure for this project:

E17.2.1 Lagimodiere Boulevard:

(a) Aquaduct

(i) Runs on the east side of Lagimodiere Boulevard throughout the project limits and crosses Lagimodiere Boulevard just north of Bishop Grandin Boulevard

(b) 600mm Feeder main

(i) Runs on the west side of Lagimodiere Boulevard from Sage Creek Boulevard to just north of Bishop Grandin Boulevard where it crosses the southbound lanes and continues north between the northbound and southbound lanes up to approximately 200m south Fermor Avenue where it crosses the southbound lanes.

E17.2.2 Logan Avenue:

(a) Feeder main

(i) Runs in the eastbound gutter lane throughout the project limits.

E17.2.3 Bison Drive

(a) Feeder main

(i) Runs parallel to Bison Drive in the south ditch with a north-south crossing approximately 50m west of the Rail crossing.

E17.3 General Considerations for Work in Close Proximity to Critical Water Infrastructure:

E17.3.1 Feeder mains and large diameter water mains are a critical component of the City of Winnipeg Regional Water Supply System and work in close proximity to feeder mains shall be undertaken with an abundance of caution. Large diameter feeder main and water mains cannot typically be taken out of service for extended periods to facilitate construction and inadvertent damage caused to the pipe would likely have catastrophic consequences.

E17.3.2 Work around critical water infrastructure shall be planned and implemented to minimize the time period that work is carried out in close proximity to the pipe and to ensure that the pipeline is not subjected to excessive construction related loads, including excessive vibrations and/or concentrated or asymmetrical lateral loads during backfill placement.

E17.3.3 Large diameter pressure pipe generally has limited ability to withstand increased earth and live loading. Therefore, every precaution must be undertaken to ensure that applied loading during all phases of construction is within accepted loading parameters. PCCP typically fails in a non-ductile mode with the potential to cause extensive consequential damage to infrastructure if failure should occur. All large diameter feeder mains/water mains have the potential to cause extensive flooding.

E17.3.4 Construction in close proximity to critical infrastructure shall not commence until both the equipment and construction method statements have been submitted, reviewed, and accepted by the Contract Administrator.

E17.4 Submittals

E17.4.1 Submit proposed construction equipment specifications to the Contract Administrator for review a minimum of ten (10) Business Days prior to construction. The equipment submission shall include:

- (a) equipment operating and payload weights;
- (b) equipment dimensions, including: wheel or track base, track length or axle spacing, track widths or wheel configurations; and,
- (c) load distributions in the intended operating configuration.

E17.4.2 Submit a construction method statement to the Contract Administrator a minimum of five (5) business days prior to construction. The construction method statement shall contain the following minimum information:

- (a) proposed construction plan including excavation locations, haul routes, excavation equipment locations, and loading positions;
- (b) excavation plans, including shoring designs, for excavations occurring in close proximity to feeder mains (within 5 m horizontal of the pipe's centerline) where the excavation to be extended below the top of the feeder mains embedment zone (150 mm above the pipe);
- (c) trenchless construction methodology for feeder main crossings, including: installation methods, means of grade control, means of confirming clear separation between the new LDS and existing feeder main; and
- (d) any other pertinent information required to accurately describe the construction activities in close proximity to the feeder main and permit the Contract Administrator to review the proposed construction plans.

E17.4.3 Incomplete or partial submissions will not be reviewed and will be returned to the Contractor for re-submission.

E17.4.4 Allow five (5) Business Days for review by the Contract Administrator.

E17.5 Feeder Main Operational Limitations

E17.5.1 Feeder main shutdowns are scheduled based on a number of factors including water demand, weather, reservoir operation, routine maintenance and repair work within the regional distribution system, and other factors. If feeder main shutdowns are required, the City shall endeavour to make requested time periods available to the Contractor to schedule his/her work requiring removal of the feeder main from service, without limiting the City's control over the operation of the feeder main to complete other work, maintain adequate water supply and storage of water and maintain the integrity of the infrastructure. The City shall reserve the right to cancel and/or delay these schedule dates at any time, due to any circumstances that could adversely affect the feeder main or water supply including, but not limited to, high water demand, abnormal weather, failures of related water system components and/or security concerns.

E17.5.2 Scheduling Restrictions:

- (a) Temporary feeder main shutdowns are typically limited to off-peak demand seasons (September 15th to May 15th) and low demand hours including evenings or other low demand periods.

E17.5.3 The Contractor shall provide Notice to the Contract Administrator in writing, a minimum of fifteen (15) Business Days prior to requiring the shutdown. The City will endeavour to schedule the shutdown as requested.

CONSTRUCTION METHODS

E17.6 Pre-Work, Planning and General Execution

- E17.6.1 No work shall commence in close proximity to feeder mains, chambers, and critical infrastructure until the equipment specifications and construction method statement have been submitted and accepted, and feeder main locations have been clearly delineated in the field. Work over feeder mains shall only be carried out with equipment that has been reviewed and quantified in terms of its loading implications on the pipe.
- E17.6.2 Contact the City of Winnipeg Water and Waste Department, Construction Services Coordinator prior to construction.
- E17.6.3 Locate feeder mains and water mains and confirm their position horizontally and vertically prior to undertaking work in close proximity to the identified feeder main. Note, exact locations to be identified in the field. Deviations from the elevations noted shall be reported to Contract Administrator for review prior to proceeding with work.
- E17.6.4 Visually delineate all critical infrastructure identified herein on Site by use of paint, staking/flagging, construction fencing, snow fencing, or other suitable methods
- E17.6.5 Only utilize construction practices and procedures that do not impart excessive vibratory loads on feeder mains and chambers or that would cause settlement of the subgrade below feeder mains and critical pipelines.
- E17.6.6 Where the existing road structure must be removed, crossing of critical infrastructure shall be prohibited from the time the existing roadway structure is removed until the completion of granular base construction. At all times prior to completion of final paving; reduce equipment speeds to levels that minimize the effects of impact loading to the critical infrastructure.
- E17.6.7 Only equipment and construction practices stipulated in the accepted construction method statement and the supplemental requirements noted herein may be utilized in close proximity to feeder mains, chambers, and other critical infrastructure identified herein.
- E17.6.8 Construction operations should be staged in such a manner as to limit multiple construction loads at one time, (e.g., offset crossings sufficiently from each other, rollers should remain a sufficient distance behind spreaders to limit loads. A reasonable offset distance is 3 m between loads).
- E17.6.9 Granular material, construction material, soil, and/or other material shall not be stockpiled on the pipelines or within 5 m of any feeder main, valve chamber, or other critical infrastructure identified herein.
- E17.6.10 The Contractor shall ensure that all crew members understand and observe the requirements of working near feeder mains, valve chambers, and critical infrastructure. Prior to commencement of on-Site work, the Contractor shall jointly conduct an orientation meeting with the Contract Administer, all superintendents, foreman, and heavy equipment operators to make all workers on the Site fully cognizant of the limitations of altered loading on, the ramifications of inadvertent damage to, and the constraints associated with work in close proximity to feeder mains and critical pipelines. New personnel introduced after commencement of the Project need to be formally orientated as outlined herein. It is recommended that restrictions associated with the crossing, consistent with the Contractor's submitted method statement be posted on Site and near the crossing.

E17.7 Demolition, Excavation, and Shoring

- E17.7.1 Use of pneumatic concrete breakers within 3 m of a feeder main, valve chamber, or critical pipeline is prohibited. Pavement shall be full depth sawcut and carefully removed. Use of hand held jackhammers for pavement removal will be allowed.
- E17.7.2 Offset excavation equipment a minimum of 3 m from the centerline of critical pipelines when undertaking excavations where there is less than 2.4 m of earth cover over the pipeline.

- E17.7.3 Excavation:
- (a) Utilize only smooth edged excavation buckets, soft excavation, or hand excavation techniques where there is less than 1.5 m of earth cover over the pipeline.
 - (b) Where there is less than 1.0 m of soil cover above the pipeline, provide full time supervision and complete the excavation utilizing hand excavation, soft excavation methods, or machine excavation. Where machine excavation is to be used the crown of the pipeline must be exposed (or suitable located) using hand or soft excavation methods a minimum of every 1.8 m.
 - (c) Where there is less than 0.5 m of soil cover above the pipeline, provide full time supervision and complete the excavation utilizing hand excavation or soft excavation methods only.
- E17.7.4 Equipment should not be allowed to operate while positioned directly over a feeder main or critical pipeline except where permitted herein, outlined in the reviewed and accepted construction method statement.
- E17.7.5 Excavations within 3 m of the outside edge of a feeder main (hydrovac holes for confirming trenchless installations excluded) and which extend below the top of the feeder main shall utilize shoring methods that precludes the movement of native in-situ soils (i.e. a tight shoring system).
- E17.8 Underground Construction and Trenchless Pipe Installation
- E17.8.1 Install pipes to the grades shown on the Drawings. A minimum clear separation distance (outside to outside of pipe wall) of 1.0m shall be maintained between crossing pipes and the feeder main and cast iron water main.
- E17.8.2 The Contractor shall locate feeder mains and confirm their position horizontally and vertically prior to commencing with any trenchless pipe installations to ensure proper clearances are maintained. Under NO circumstances should blind coring proceed across feeder mains.
- E17.8.3 The Contractor shall visually confirm the location and alignment of the drill rods or jacking pipe (horizontally and vertically) prior to proceeding with the trenchless installation beneath the feeder main. It is recommended that the new pipe alignment be confirmed within 2 m of the outside of the feeder main pipe but no closer than 0.5 m from the outside edge of the pipe.
- E17.8.4 No trenchless methods involving soil displacement (plugs) shall be permitted in the vicinity of the Feeder main.
- E17.8.5 Pressure grouting or approved alternative methods shall be used to fill voids caused by the installation or if the bored hole diameter is greater than the outside diameter of the pipe by more than 25 mm.
- E17.8.6 Where excavation is required within the feeder main's embedment zone, the Contractor shall take steps to ensure the granular embedment material surrounding the feeder main remains stable during the work and the feeder main outside of the excavation is not undermined.
- E17.9 Subgrade Construction
- E17.9.1 Subgrade and backfill compaction within 3 metres (horizontal) of a critical pipeline or valve chamber shall be limited to non-vibratory methods only. Small walk behind vibratory packers will be permitted.
- E17.9.2 Subgrade, sub-base and base course construction shall be kept in a rut free condition at all times. Construction equipment is prohibited from crossing pipelines if the grade is insufficient to support the equipment without rutting.
- E17.9.3 Subgrade conditions should be inspected by personnel with competent geotechnical experience (e.g. ability to adequately visually classify soils and competency of subgrade,

subbase, and base course materials). In the event of encountering unsuitable subgrade materials above the feeder main, proposed design revisions shall be submitted to this office for review to obtain approval from the Water and Waste Department relative to any change in conditions.

- E17.9.4 Fill material shall not be dumped directly on pipelines but shall be stockpiled outside the limits noted in these recommendations and shall be carefully bladed in-place
- E17.9.5 Only use compaction equipment approved by the contract administrator to compact fill materials above critical pipelines. Compaction of fill materials shall be completed using static methods only, no vibratory compaction will be allowed within the limits noted in these recommendations.
- E17.9.6 Construction operations shall be staged to minimize the time period between excavation to subgrade and placement of granular subbase materials. Should bare subgrade be left overnight, measures shall be implemented to protect the subgrade against inadvertent travel over it and to minimize the impact of wet weather.
- E17.10 Subbase and Base Course Construction
- E17.10.1 Subbase or base course materials shall not be dumped directly on pipelines but shall be stockpiled outside limits noted in these recommendations and shall be carefully bladed in-place.
- E17.10.2 Subbase compaction within 3 m horizontal of the centreline of a critical pipeline shall be either carried out by static methods (without vibration) or with smaller approved equipment such as hand held plate packers or smaller roller equipment.
- E17.11 Paving
- E17.11.1 When constructing asphalt pavements only non-vibratory compaction should be used within 3 m (horizontal) of the center of critical pipelines.

E18. CASH ALLOWANCE FOR ADDITIONAL WORK

- E18.1 Additional Work may be necessitated due to unforeseen circumstances that may arise during the course of the project due to:
- (a) Additions to the scope of Work by the Contract Administrator, beyond that defined herein.
- E18.2 A cash allowance has been included on Form B: Prices.
- E18.3 The City reserves the right to delete any or all of the Cash Allowance from the Contract if the Work intended to be covered by the Cash Allowance is not required, or if the Works intended are found to be more extensive than the provisional Cash Allowance.
- E18.4 Cost of additional work shall be evaluated by the methods outlined in C7.4, and a Change Order prepared by the Contract Administrator. Cost of the Change Order will be paid on the Progress Estimate and deducted from the Cash Allowance. If the valuation of the authorized work exceeds the Value of the Cash Allowance, the Contract Value will be adjusted by the shortfall.
- E18.5 Additional services and/or Work will not be initiated for:
- (a) Reasons of lack of performance or errors in execution.
- (b) Scheduling changes initiated by the City, where at least 24 hours' notice is given prior to the Contractors schedule time to be on Site.
- E18.6 Should it be determined that additional material or services are required, the Contract Administrator shall approve the Work, prior to commencement of the additional Work.
- E18.7 Material Mark-Up Factors:
- (a) The base cost is to be the wholesale cost of the material, regardless of the Contractor or Subcontractor supplying the material.

- (b) In general, the party (Contractor or Subcontractor) supplying the material is the party that purchases the material from a supplier who does not perform any work on Site, unless otherwise determined by the Contract Administrator.
- (c) Where the Contractor is supplying the material, the mark-up on the material is limited to fifteen percent (15%).
- (d) Where the Contractor's immediate Subcontractor is supplying the material the total mark-up on the material including all Subcontractors and the Contractor is limited to twenty-five percent (25%)
 - (i) The Subcontractor's mark-up on the material is limited to fifteen percent (15%);
 - (ii) The Contractor's mark-up on the material is limited to ten percent (10%).
- (e) A Third-Level Subcontractor is a Subcontractor of a Subcontractor of the Contractor.
 - (i) No Third-Level Subcontractors on this project are approved for additional mark-up.
 - (ii) In the event that a Third-Level Subcontractor is utilized, that is not approved for additional mark-up, the Contractor is responsible for coordinating the split of the maximum approved mark-up between the Contractor and Subcontractors.

E19. HYDRO SEED

DESCRIPTION

- E19.1 Further to CW 3520-R7, this specification covers the seed mix type and payment of Hydro Seeding.

MATERIALS

- E19.2 The seed mix shall consist of:
- (a) Seventy percent (70%) Fults or Nuttall's Alkaligrass (*Puccinellias pp.*)
 - (b) Twenty percent (20%) Audubon or Aberdeen Creeping Red Fescue
 - (c) Ten percent (10%) Perennial Ryegrass

MEASUREMENT AND PAYMENT

- E19.3 Supply, Placement and maintenance of Hydro Seed will be paid for at the Contract Unit Price per square meter for "Hydro Seed". The area to be paid for will be the Seeding will be measured as the total number of square metres seeded in accordance with this specification, which price shall include payment in full for supply of materials, and completing all operations herein described and all other items incidental to the work. Payment for Hydro Seeding shall be as follows:
- (a) Fifty percent (50%) upon supply and placement
 - (b) Fifty percent (50%) up termination of the Maintenance period